

**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

1216560

TestAmerica Laboratories, Inc.

**ANALYTICAL REPORT**

F10-088

Lot #: F0B050589

SDG #: SL858

Mike Neely

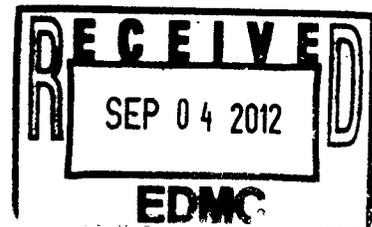
CH2M Hill Plateau Remediation  
PO Box 1500, MS B6-06  
Richland, WA 99352

TESTAMERICA LABORATORIES, INC.



Michael C. Franks  
Project Manager

February 16, 2010



# TestAmerica

## CASE NARRATIVE

THE LEADER IN ENVIRONMENTAL TESTING  
CH2MHill Plateau Remediation Company  
P.O. Box 1600  
MS B3-60  
Richland, Washington 99352  
February 16, 2010  
Attention: Mike Neely

TestAmerica Laboratories, Inc.

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SDG	: SL858
Number of Samples	: seven samples
Sample Matrix	: Solid
Data Deliverable	: Summary
Date SDG Closed	: February 5, 2010

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### II. Introduction

On February 5, 2010, seven solid samples were received by TestAmerica - St. Louis for chemical analysis. The samples were received within temperature criteria. See the COC and CUR forms for documentation of any variations on receipt conditions and temperature. Upon receipt, the samples were given laboratory Ids to correspond with specific client Ids. Please refer to the Sample Summary sheets attached to this case narrative. This report is incomplete without the narrative.

The following SAFs are associated with this SDG: F10-088

### III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits. All results are based upon samples as they were received, i.e. wet weight, unless otherwise noted on the data sheets. See the attached Methods Summary Form for the methods used in this SDG.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with a LCS/LCS duplicate.

Deviation from Request: None

### IV. Definitions

QCBLK-	Quality Control Blank, Method Blank
QCLCS-	Quality Control Laboratory Control Sample, Blank Spike
DUP-	Laboratory Duplicate
MS-	Matrix Spike
MSD-	Matrix Spike Duplicate

The term "Detection Limit" used in the analytical data report refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## CH2M Hill Plateau Remediation Company

TestAmerica Laboratories, Inc.

February 17, 2010

SDG: SL858

The following data qualifiers may be applicable to the results in this report, as appropriate.

- B – For inorganic analyses, the sample result is greater than the MDL but less than the RL.
- B – For organic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- J – For organic analyses, the sample is estimated and less than the RL.
- C – For inorganic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- D – For all analyses, the sample result was obtained from the analysis of a dilution.
- N – For inorganics and GC analyses, the spike/spike duplicate recoveries are outside QC limits.
- T – For GCMS analyses, the spike/spike duplicate recoveries are outside QC limits.

### Volatiles

Batch: 0040348

The surrogate recovery for 1,2-Dichloroethane-d4 is outside the upper QC limit, indicating a potential positive bias. There were no target analytes associated with this surrogate observed above the reporting limit in the sample; therefore the sample data was not adversely affected by this excursion.

**Affected Samples:**

FOB050589 (6): B23N39

The internal standard (IS) recovery is outside the lower QC limit, indicating a potential high bias for the analyte. Sample was re-prepared and re-analyzed within holding time. The reanalysis, with similar failed IS, yield comparable results. The original results only are reported.

**Affected Samples:**

FOB050589 (6): B23N39

The MS/MSD RPD for Carbon tetrachloride is not within method acceptance criteria. This is due to the weight differences between the MS and MSD making it statistically impossible to achieve a passing RPD. The MS/MSD recoveries are within QC limits. Method performance is demonstrated by the remaining acceptable MS/MSD and LCS recovery.

**Affected Samples:**

FOB050589 (6): B23N39

### Semivolatiles

Batch: 0039217

The LCS recovery for Benzo(a)anthracene is outside the upper QC limit, indicating a potential positive bias for these analytes. This analyte was not observed above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.

**Affected Samples:**

FOB050589 (1): B23N34

FOB050589 (5): B23N38

FOB050589 (2): B23N35

FOB050589 (6): B23N39

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## *CH2M Hill Plateau Remediation Company*

February 17, 2010

SDG: SL858

TestAmerica Laboratories, Inc.

FOB050589 (3): B23N36  
 FOB050589 (4): B23N37

FOB050589 (7): B23N40

### TPH-DRO

Batch: 0039128

The LCS and MSD surrogate recoveries are outside acceptance limits. The LCS and MSD spike recoveries are within QC limits demonstrating acceptable sample extraction and instrument performance.

#### **Affected Samples:**

FOB050589 (1): B23N34	FOB050589 (5): B23N38
FOB050589 (2): B23N35	FOB050589 (6): B23N39
FOB050589 (3): B23N36	FOB050589 (7): B23N40
FOB050589 (4): B23N37	

The CCV surrogate recovery for ECAL549 was outside the lower QC limits indicating a potential low bias for the surrogate in the associated samples. The sample surrogate recoveries were within acceptable QC limits.

#### **Affected Samples:**

FOB050589 (1): B23N34	FOB050589 (5): B23N38
FOB050589 (2): B23N35	FOB050589 (6): B23N39
FOB050589 (3): B23N36	FOB050589 (7): B23N40
FOB050589 (4): B23N37	

### PCBs

Batch: 0039129

The CCV recovery for MCAL550 and MCAL572 was outside the lower QC limits (greater than 20%D) on the primary/unreported column for Aroclor 1016 indicating a potential low bias for the analyte in the associated samples. This column will be used as a confirmation column only and thus no data results will be reported from this column.

#### **Affected Samples:**

FOB050589 (1): B23N34	FOB050589 (5): B23N38
FOB050589 (2): B23N35	FOB050589 (6): B23N39
FOB050589 (3): B23N36	FOB050589 (7): B23N40
FOB050589 (4): B23N37	

### ICP Metals

Batch: 0039073

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## CH2M Hill Plateau Remediation Company

February 17, 2010

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TestAmerica Laboratories, Inc.

The samples were analyzed at a dilution due to high concentrations of target and interfering analytes. The reporting limit has been adjusted only for those targets reported from the dilution run. The analytes analyzed at a dilution are qualified with a "D" flag.

**Affected Samples:**

FOB050589 (1): B23N34

FOB050589 (5): B23N38

FOB050589 (2): B23N35

FOB050589 (6): B23N39

FOB050589 (4): B23N37

FOB050589 (7): B23N40

Boron was detected in the method blank at a concentration above the method detection limit but below the reporting limit. This analyte is qualified with a "C" flag on samples with Boron results less than 10x the method blank result.

**Affected Samples:**

FOB050589 (1): B23N34

FOB050589 (5): B23N38

FOB050589 (2): B23N35

FOB050589 (6): B23N39

FOB050589 (4): B23N37

FOB050589 (7): B23N40

FOB050589 (3) B23N36 P.D. min 10x  
6/28/2011

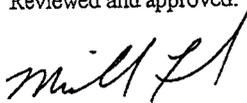
There were no observations or nonconformances for the following methods:

Ion Chromatography

pH

I certify that this Summary Package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. The Laboratory Manager or a designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Reviewed and approved:



Michael Franks

St. Louis Project Manager

## Problem and Discrepancy Report

TASL

SDG SL858c

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**1. The data package has the following issues:**

- a) We requested Nitrogen in Nitrate and nitrogen in nitrite for samples B23N34, B23N35, B23N36, B23N37, B23N38, B23N39, & B23N40. The lab reported Nitrate and nitrite.

**Resolution:** *Provide results for N in nitrite and N in nitrate.*

**Lab Response:** None provided.

**CHPRC Review:** A review was conducted of the P&D on 6/28/2011. Review revealed that data were reported as Nitrate and Nitrite in the TASL hard copy data package and Nitrogen in Nitrate (NO<sub>3</sub>-N) and Nitrogen in Nitrite (NO<sub>2</sub>-N) in the electronic upload to SDT. Due to the age of the P&D and lack of laboratory response, this issue was closed with no further action required.

**Note to Data Reviewer:** *Data reviewer needs to be aware of the issues associated with the anomalous reporting of anion data (Nitrogen in Nitrate and Nitrogen in Nitrite vs Nitrate and Nitrite) for samples B23N34, B23N35, B23N36, B23N37, B23N38, B23N39 and B23N40 and so note when reviewing affected data.*

- b) Case narrative – Reference to seven water samples is not correct. Review of the COCs and data package results show results for seven solid samples.

**Resolution:** *Provide correction.*

**Lab Response:** None provided.

**CHPRC Review:** A review was conducted of the P&D on 6/28/2011. Review revealed no reference to water samples in the case narrative. No corrective action required.

- c) Case narrative, ICP Metals, page 5 of 125, Boron in Blank, Affected Samples – Please add sample# ~~B23N36~~ ~~B23N35~~ to Affected Samples list

**Resolution:** *Provide correction.*

**Lab Response:** None provided.

Provide a resolution to each issue noted on the report

**Problem and Discrepancy Report**  
**TASL**  
**SDG SL858c**

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**CHPRC Review:** A review was conducted of the P&D on 6/28/2011. The TASL hard copy data package was modified by CHPRC.

d) Total Metals, Boron result, Sample# B23N34, B23N37, B23N38 - missing "C" qualifier

**Resolution:** *Provide correct qualifiers.*

**Lab Response:** None provided.

**CHPRC Review:** A review was conducted of the P&D on 6/28/2011. The TASL hard copy data package and electronic data were modified by CHPRC.

e) The hard copy and electronic pH results are missing for sample number B23N40.

**Resolution:** *Provide missing results*

**Lab Response:** None provided.

**CHPRC Review:** A review was conducted of the P&D on 6/28/2011. Due to the age of the P&D and lack of laboratory response, this issue was closed with no further action required.

**Note to Data Reviewer:** *Data reviewer needs to be aware of the issue associated with missing pH data for sample# B23N40 and so note when reviewing affected data.*

Please correct the issues and resubmit the hard copy and electronic data package.

Provide a resolution to each issue noted on the report

**METHODS SUMMARY**

FOB050589

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Bromide	MCAWW 300.0A	MCAWW 300.0A
Chloride	MCAWW 300.0A	MCAWW 300.0A
Extractable Petroleum Hydrocarbons	SW846 8015 MOD	SW846 3550
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A	SW846 7471A
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
PCBs by SW-846 8082	SW846 8082	SW846 3550B/366
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3550B
Soil and Waste pH	SW846 9045C	SW846 DI-LEACHA
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B	
Volatile Organics by GC/MS	SW846 8260B	SW846 5035

**References:**

- MCAWW "Methods for Chemical Analysis of Water and Wastes",  
EPA-600/4-79-020, March 1983 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical  
Methods", Third Edition, November 1986 and its updates.

**SAMPLE SUMMARY**

F0B050589

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
LVCEH	001	B23N34	02/02/10	12:35
LVCEM	002	B23N35	02/02/10	13:05
LVCEN	003	B23N36	02/02/10	13:20
LVCEP	004	B23N37	02/02/10	09:22
LVCEQ	005	B23N38	02/02/10	09:22
LVCET	006	B23N39	02/02/10	10:02
LVCEV	007	B23N40	02/02/10	10:40

**NOTE(S) :**

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

P&D SUBMITTAL

JUNE 28, 2011

REVISION 1

858  
336

COLLECTOR <b>D. J. Sparks</b>		CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F10-088-012		PAGE 1 OF 2	
COMPANY CONTACT HIATT CAOILE, C		TELEPHONE NO. 373-7991		PROJECT COORDINATOR WDRIG, DL		PRICE CODE 8B		DATA TURNAROUND 7 Days / 15 Days	
PROJECT DESIGNATION 600-262 Waste Sites Sampling and Analysis - Soil		ACTUAL SAMPLE DEPTH 20"		COA 302110ES10		METHOD OF SHIPMENT GOVERNMENT VEHICLE			
FIELD LOGBOOK NO. HNF-N-307-8		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. 793243127806					
PRESERVATION		Cool <7C and >-20C	Cool ~4C	Cool ~4C	Cool ~4C	None	None	None	None
TYPE OF CONTAINER		ag*	ag	ag	G/P	Square Bottle - Poly	G/P	G/P	G/P
NO. OF CONTAINER(S)		5	1	1	1	1	1	1	1
VOLUME		40ml	250ml	120ml	60ml	500ml	120ml	60ml	60ml
SPECIAL HANDLING AND/OR STORAGE		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	SEE ITEM (6) IN SPECIAL INSTRUCTIONS	SEE ITEM (7) IN SPECIAL INSTRUCTIONS	SEE ITEM (8) IN SPECIAL INSTRUCTIONS
MATRIX*		A=Air DL=Drum L=Liquid DS=Drum S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other							
POSSIBLE SAMPLE HAZARDS / REMARKS		Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)							
SHIPPED TO		TASL							
Waste Sampling & Characterization		MA 2-3-10							
ICE CHEST NO.		GWS-055							
SAMPLING LOCATION		600-262; Test Crib Box 1 20 inches depth - bgs							
COMPANY CONTACT		D. J. Sparks							
PROJECT COORDINATOR		WDRIG, DL							
TELEPHONE NO.		373-7991							
PROJECT DESIGNATION		600-262 Waste Sites Sampling and Analysis - Soil							
FIELD LOGBOOK NO.		HNF-N-307-8							
OFFSITE PROPERTY NO.		N/A							
BILL OF LADING/AIR BILL NO.		793243127806							
METHOD OF SHIPMENT		GOVERNMENT VEHICLE							
PRICE CODE		8B							
DATA TURNAROUND		7 Days / 15 Days							
AIR QUALITY									
METHOD OF SHIPMENT		GOVERNMENT VEHICLE							

SPECIAL INSTRUCTIONS  
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
D. J. Sparks	DR WILLIAMSON	FEB 07 2010 1400
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
SS4 #1	CHPRC	FEB 04 2010 1100
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
DR Williamson	FEA EX	FEB 04 2010 1100
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
PROFX	A. Branson	FEB 04 2010 9:30
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME

LABORATORY SECTION	RECEIVED BY	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DATE/TIME

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F10-088-012	PAGE 2 OF 2
COLLECTOR	HIATT CAOILE, C	TELEPHONE NO.	373-7991	PROJECT COORDINATOR	WDRJG, DL
SAMPLING LOCATION	600-262; Test Crib Box 1 20 inches depth - bags	PROJECT DESIGNATION	600-262 Waste Sites Sampling and Analysis - Soil	PRICE CODE	8B
ICE CHEST NO.	N/A	FIELD LOGBOOK NO.	HNF-N-507-8	AIR QUALITY	<input type="checkbox"/>
SHIPPED TO	Waste Sampling & Characterization	ACTUAL SAMPLE DEPTH	20"	METHOD OF SHIPMENT	GOVERNMENT VEHICLE
		OFFSITE PROPERTY NO.	N/A	COA	302110ES10
				BILL OF LADING/AIR BILL NO.	N/A

**SPECIAL INSTRUCTIONS**

- \*\* The CACN for all analytical work at WSCF laboratory is 401352ES20.
- \*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
- \*\* All VOA samples will be collected using EPA Method 5035A.
- \*\* VOA sample bottle sets will include 5 bottles for low level analysis.
- \*\* The laboratory is to use one of the low level VOA bottles for moisture content determination.
- \*\* VOA bottles will be labeled with an appended suffix of K, L, M, N, or P for low level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be include as part of the sample ID reported in the final data packages.
- (1)VOA - 5035/8260 (LOW LEVEL) (Carbon tetrachloride)
- (2)Semi-VOA - 8270B (TCL) (Dibenz[a,h]anthracene, Fluorene, Benzo(b)fluoranthrene, Benzo(a)anthracene, Phenanthrene, Benzo(g,h,i)perylene, Fluoranthene, Benzo(a)pyrene, Anthracene, Pyrene, Benzo(k)fluoranthene, Acenaphthene, Naphthalene, Chrysene, Indeno(1,2,3-cd)pyrene, Acenaphthylene)
- (3)ICP/MS - 200.8 (TAL) (Antimony, Barium, Chromium, Cobalt, Cadmium, Copper, Zinc, Manganese, Nickel, Vanadium, Silver) ICP/MS - 200.8 (Add-on) (Arsenic, Lead, Tin, Strontium, Thallium, Uranium, Selenium) ICP Metals - 6010B (Add-On) (Boron, Beryllium, Lithium) 200.8\_Hg - ICPMS (Mercury)
- (4)PCBs - 8082 (Aroclor-1260, Aroclor-1254, Aroclor-1242, Aroclor-1221, Aroclor-1016, Aroclor-1248)
- (5)IC Anions - 300.0 (Phosphorus in phosphate, Chloride, Bromide, Nitrogen in Nitrite, Fluoride, Nitrogen in Nitrate, Sulfate)
- (6)Gamma Spectroscopy (Europium-155, Cesium-137, Europium-154, Europium-152) Gamma Spec - Add-on (Strontium-89)
- (7)Americium-241 (Americium-241) Isotopic Plutonium; Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238) Strontium-89,90 -- Total Sr;

**ORIGINAL**

P&D SUBMITTAL

JUNE 28, 2010

REVISION

<b>CH2MHILL Plateau Remediation Company</b> COLLECTOR HIATT CAOILE, C TELEPHONE NO. 373-7991		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b> PROJECT COORDINATOR WIDRIG, DL SAF NO. F10-088 COA 302110ES10 BILL OF LADING/AIR BILL NO. N/A		F10-088-013 PRICE CODE 8B AIR QUALITY <input type="checkbox"/> METHOD OF SHIPMENT GOVERNMENT VEHICLE		PAGE 1 OF 2 DATA TURNAROUND 7 Days / 15 Days	
<b>SAMPLING LOCATION</b> 600-262; Test Crib Box 1 - 60 in. by 2 N/A		<b>PROJECT DESIGNATION</b> 600-262 Waste Sites Sampling and Analysis - Soil		ACTUAL SAMPLE DEPTH 60"		FIELD LOGBOOK NO. HNF-N-507-8	
<b>MATRIX*</b> A=Air DL=Drum L=Liquid DS=Drum S=Soil O=Oil T=Tissue V=Vegetation W=Water WI=Wipe X=Other		<b>PRESERVATION</b> Cool <7C and >20C 8GS*		Cool -4C G/P		Cool -4C G/P	
<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)		<b>TYPE OF CONTAINER</b> 5		Cool -4C 1		Cool -4C 1	
<b>SPECIAL HANDLING AND/OR STORAGE</b>		<b>VOLUME</b> 40mL		Cool -4C 250mL		Cool -4C 250mL	
<b>SAMPLE NO.</b> B23N35		<b>MATRIX*</b> SOIL		Cool -4C 60mL		Cool -4C 60mL	
<b>CHAIN OF POSSESSION</b>		<b>SIGN/ PRINT NAMES</b>		Cool -4C 120mL		Cool -4C 60mL	
RELINQUISHED BY/REMOVED FROM D. J. Sparks DATE/TIME FEB 02 2010		RECEIVED BY/STORED IN [Signature] DATE/TIME FEB 02 2010		Cool -4C 60mL		Cool -4C 60mL	
RELINQUISHED BY/REMOVED FROM [Signature] DATE/TIME FEB 04 2010		RECEIVED BY/STORED IN CHPRC [Signature] DATE/TIME FEB 04 2010		Cool -4C 60mL		Cool -4C 60mL	
RELINQUISHED BY/REMOVED FROM CHPRC [Signature] DATE/TIME FEB 04 2010		RECEIVED BY/STORED IN FEA EX [Signature] DATE/TIME FEB 04 2010		Cool -4C 60mL		Cool -4C 60mL	
RELINQUISHED BY/REMOVED FROM RDE [Signature] DATE/TIME FEB 04 2010		RECEIVED BY/STORED IN [Signature] AR- [Signature] DATE/TIME FEB 04 2010		Cool -4C 60mL		Cool -4C 60mL	
RELINQUISHED BY/REMOVED FROM [Signature] DATE/TIME FEB 04 2010		RECEIVED BY/STORED IN [Signature] DATE/TIME FEB 04 2010		Cool -4C 60mL		Cool -4C 60mL	
RELINQUISHED BY/REMOVED FROM [Signature] DATE/TIME FEB 04 2010		RECEIVED BY/STORED IN [Signature] DATE/TIME FEB 04 2010		Cool -4C 60mL		Cool -4C 60mL	
<b>LABORATORY SECTION</b>		<b>RECEIVED BY</b>		Cool -4C 60mL		Cool -4C 60mL	
<b>FINAL SAMPLE DISPOSITION</b>		<b>DISPOSAL METHOD</b>		Cool -4C 60mL		Cool -4C 60mL	

SPECIAL INSTRUCTIONS  
 SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

P&D SUBMITTAL

JUNE 28, 2011

REVISION 1

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F10-088-013	PAGE 2 OF 2
COLLECTOR <b>D. J. Sparks</b>	COMPANY CONTACT HIATT CAOILE, C	TELEPHONE NO. 373-7991	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE 8B	DATA TURNAROUND 7 Days / 15 Days
SAMPLING LOCATION 600-262; Test Crib Box 1 - 60 in bgs.	PROJECT DESIGNATION 600-262 Waste Sites Sampling and Analysis - Soil	FIELD LOGBOOK NO. HNF-N-507-8	SAF NO. F10-088	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. N/A	ACTUAL SAMPLE DEPTH 60"	COA 302110ES10	BILL OF LADING/AIR BILL NO. N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization # 2-3-10	OFFSITE PROPERTY NO. N/A				

**SPECIAL INSTRUCTIONS**

- \*\* The CACN for all analytical work at WSCF laboratory is 401352ES20.
- \*\* The 200 Area S&GR Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
- \*\* All VOA samples will be collected using EPA Method 5035A.
- \*\* VOA sample bottle sets will include 5 bottles for low level analysis.
- \*\* The laboratory is to use one of the low level VOA bottles for moisture content determination.
- \*\* VOA bottles will be labeled with an appended suffix of K, L, M, N, or P for low level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be include as part of the sample ID reported in the final data packages.
- (1)VOA - 5035/8260 (LOW LEVEL) (Carbon tetrachloride)
- (2)Semi-VOA - 8270B (TCL) (Dibenz[a,h]anthracene, Fluorene, Benzo(b)fluoranthene, Benzo(a)anthracene, Phenanthrene, Benzo(g,h,i)perylene, Fluoranthene, Benzo(a)pyrene, Anthracene, Pyrene, Benzo(k)fluoranthene, Acenaphthene, Naphthalene, Chrysene, Indeno(1,2,3-cd)pyrene, Acenaphthylene) TPH-DieselKerosene Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
- (3)ICP/MS - 200.8 (TAL) (Antimony, Barium, Chromium, Cobalt, Cadmium, Copper, Zinc, Manganese, Nickel, Vanadium, Silver) ICP/MS - 200.8 (Add-on) (Arsenic, Lead, Tin, Strontium, Thallium, Uranium, Selenium) ICP Metals - 60108 (Add-On) (Boron, Beryllium, Lithium) 200.8\_HG - ICPMS (Mercury)
- (4)PCBS - 8082 (Aroclor-1260, Aroclor-1254, Aroclor-1242, Aroclor-1232, Aroclor-1221, Aroclor-1016, Aroclor-1248)
- (5)IC Anions - 300.0 (Phosphorus in phosphate, Chloride, Bromide, Nitrogen in Nitrate, Sulfate)
- (6)Gamma Spectroscopy (Europium-155, Cesium-137, Europium-154, Europium-152) Gamma Spec - Add-on (Strontium-85)
- (7)Americium-241 (Americium-241) Isotopic Plutonium; Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238) Strontium-89,90 -- Total Sr;

 ORIGINAL

A-6003-618(01/06)



JUNE 28, 2011

REVISION 1

P&D SUBMITTAL

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F10-088-014	PAGE 2 OF 2
COLLECTOR	D. J. Sparks	COMPANY CONTACT	HIATT CAOTILE, C	TELEPHONE NO.	373-7991
SAMPLING LOCATION	600-262; Test Crib Box 1 - 8 ft. bags.	PROJECT DESIGNATION	600-262 Waste Sites Sampling and Analysis - Soil	PROJECT COORDINATOR	WDRIG, DL
ICE CHEST NO.	N/A	FIELD LOGBOOK NO.	HNF-N-507-8	SAF NO.	F10-088
SHIPPED TO	TASL	OFFSITE PROPERTY NO.	N/A	COA	302110ES10
Waste Sampling & Characterization # 2-3-10		BILL OF LADING/AIR BILL NO.	N/A	METHOD OF SHIPMENT	GOVERNMENT VEHICLE
<p><b>SPECIAL INSTRUCTIONS</b></p> <p>** The CACN for all analytical work at WSCF laboratory is 401352ES20.</p> <p>** The 200 Area S&amp;GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.</p> <p>** All VOA samples will be collected using EPA Method 5035A.</p> <p>** VOA sample bottle sets will include 5 bottles for low level analysis.</p> <p>** The laboratory is to use one of the low level VOA bottles for moisture content determination.</p> <p>** VOA bottles will be labeled with an appended suffix of K, L, M, N, or P for low level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be include as part of the sample ID reported in the final data packages.</p> <p>(1)VOA - 5035/8260 (LOW LEVEL) (Carbon tetrachloride)</p> <p>(2)Semi-VOA - 8270B (TCL) (Dibenz[a,h]anthracene, Fluorene, Benzo(b)fluoranthene, Fluorene, Benzo(a)anthracene, Phenanthrene, Benzo(g,h,i)perylene, Fluoranthene, Benzo(a)pyrene, Anthracene, Pyrene, Benzo(k)fluoranthene, Acenaphthene, Naphthalene, Chrysene, Indeno(1,2,3-cd)pyrene, Acenaphthylene) TPH-Diesel/Kerosene Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)</p> <p>(3)ICP/MS - 200.8 (TAL) (Antimony, Barium, Chromium, Cobalt, Cadmium, Copper, Zinc, Manganese, Nickel, Vanadium, Silver) ICP/MS - 200.8 (Add-on) (Arsenic, Lead, Tin, Strontium, Thallium, Uranium, Selenium) ICP Metals - 6010B (Add-On) (Boron, Beryllium, Lithium) 200.8_HG - ICPMS (Mercury)</p> <p>(4)PCBs - 8082 (Aroclor-1260, Aroclor-1254, Aroclor-1242, Aroclor-1232, Aroclor-1221, Aroclor-1016, Aroclor-1248)</p> <p>(5)IC Anions - 300.0 (Phosphorus in phosphate, Chloride, Bromide, Nitrogen in Nitrate, Fluoride, Nitrogen in Nitrate, Sulfate)</p> <p>(6)Gamma Spectroscopy (Europium-155, Cesium-137, Europium-154, Europium-152) Gamma Spec - Add-on (Strontium-85)</p> <p>(7)Americium-241 (Americium-241) Isotopic Plutonium; Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238) Strontium-89,90 - Total Sr;</p>					

ORIGINAL



CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F10-088-015	PAGE 2 OF 2
COLLECTOR	HIATT CAOILE, C	TELEPHONE NO.	373-7991	PROJECT COORDINATOR	WIDRIG, DL
SAMPLING LOCATION	600-262; Test Crib Box 2 DUP	PROJECT DESIGNATION	600-262 Waste Sites Sampling and Analysis - Soil	PRICE CODE	8B
ICE CHEST NO.	600-262-010	FIELD LOGBOOK NO.	HNF-N-507-8	AIR QUALITY	<input type="checkbox"/>
SHIPPED TO	TASL	OFFSITE PROPERTY NO.	N/A	METHOD OF SHIPMENT	GOVERNMENT VEHICLE
	Waste Sampling & Characterization 3-3-10	ACTUAL SAMPLE DEPTH	9-2'	COA	302110ES10
	6 use-058			BILL OF LADING/AIR BILL NO.	N/A

**SPECIAL INSTRUCTIONS**

- \*\* The CACN for all analytical work at WSCF laboratory is 401352ES20.
  - \*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
  - \*\* All VOA samples will be collected using EPA Method 5035A.
  - \*\* VOA sample bottle sets will include 5 bottles for low level analysis.
  - \*\* The laboratory is to use one of the low level VOA bottles for moisture content determination.
  - \*\* VOA bottles will be labeled with an appended suffix of K, L, M, N, or P for low level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be include as part of the sample ID reported in the final data packages.
- (1)VOA - 5035/8260 (LOW LEVEL) {Carbon tetrachloride}
  - (2)Semi-VOA - 82708 (TCL) {Dibenz(a,h)anthracene, Fluorene, Benzo(b)fluoranthene, Benzo(a)anthracene, Phenanthrene, Benzo(a)pyrene, Fluoranthene, Benzo(a)pyrene, Anthracene, Pyrene, Benzo(k)fluoranthene, Acenaphthene, Naphthalene, Chrysene, Indeno(1,2,3-cd)pyrene, Acenaphthylene} TPH-DieselKerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
  - (3)ICP/MS - 200.8 (TAL) {Antimony, Barium, Chromium, Cobalt, Cadmium, Copper, Zinc, Manganese, Nickel, Vanadium, Silver} ICP/MS - 200.8 (Add-on) {Arsenic, Lead, Tin, Strontium, Thallium, Uranium, Selenium} ICP Metals - 6010B (Add-On) {Boron, Beryllium, Lithium} 200.8\_HG - ICPMS {Mercury}
  - (4)PCBs - 8082 {Aroclor-1260, Aroclor-1254, Aroclor-1242, Aroclor-1232, Aroclor-1221, Aroclor-1016, Aroclor-1248}
  - (5)IC Anions - 300.0 {Phosphorus in phosphate, Chloride, Bromide, Nitrogen in Nitrate, Fluoride, Nitrogen in Nitrate, Sulfate}
  - (6)Gamma Spectroscopy {Europium-155, Cesium-137, Europium-154, Europium-152} Gamma Spec - Add-on {Strontium-85}
  - (7)Americium-241 {Americium-241} Isotopic Plutonium; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238} Strontium-89,90 - Total Sr;

**ORIGINAL**







CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F10-088-017	PAGE 2 OF 2
COLLECTOR <b>D. J. Sparks</b>	COMPANY CONTACT HIATT CAOILE, C	TELEPHONE NO. 373-7991	PROJECT COORDINATOR WDRIG, DL	PRICE CODE 8B	DATA TURNAROUND 7 Days / 15 Days
SAMPLING LOCATION 600-262; Test Crib Box 2 - 60 in. bgs.	PROJECT DESIGNATION 600-262 Waste Sites Sampling and Analysis - Soil	FIELD LOGBOOK NO. <b>HNF-N-507-8</b>	SAF NO. F10-088	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE
ICE CHEST NO. <i>2-APP 6wsc-05e</i>	ACTUAL SAMPLE DEPTH <b>40-60'</b>	OFFSITE PROPERTY NO. N/A	COA 302110ES10	BILL OF LADING/AIR BILL NO. N/A	

**SPECIAL INSTRUCTIONS**

\*\* The CACN for all analytical work at WSCF laboratory is 401352ES20.  
 \*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.  
 \*\* All VOA samples will be collected using EPA Method 5035A.  
 \*\* VOA sample bottle sets will include 5 bottles for low level analysis.  
 \*\* The laboratory is to use one of the low level VOA bottles for moisture content determination.  
 \*\* VOA bottles will be labeled with an appended suffix of K, L, M, N, or P for low level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be include as part of the sample ID reported in the final data packages.  
 (1)VOA - 5035/8260 (LOW LEVEL) (Carbon tetrachloride).  
 (2)Semi-VOA - 8270B (TCL) (Dibenz[a,h]anthracene, Fluorene, Benzo(b)fluoranthene, Benzo(a)anthracene, Phenanthrene, Benzo(g,h)perylene, Fluoranthene, Benzo(a)pyrene, Anthracene, Pyrene, Benzo(k)fluoranthene, Acenaphthene, Naphthalene, Chrysene, Indeno(1,2,3-cd)pyrene, Acenaphthylene) TPH-Dieselkerosene Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)  
 (3)ICP/MS - 200.8 (TAL) (Antimony, Barium, Chromium, Cobalt, Cadmium, Copper, Zinc, Manganese, Nickel, Vanadium, Silver) ICP/MS - 200.8 (Add-on) (Arsenic, Lead, Tin, Strontium, Thallium, Uranium, Selenium) ICP Metals - 6010B (Add-On) (Boron, Beryllium, Lithium) 200.8\_HG - ICPMS (Mercury)  
 (4)PCBs - 8082 (Aroclor-1260, Aroclor-1254, Aroclor-1242, Aroclor-1232, Aroclor-1221, Aroclor-1016, Aroclor-1248)  
 (5)IC Anions - 300.0 (Phosphorus in phosphate, Chloride, Bromide, Nitrogen in Nitrate, Fluoride, Nitrogen in Nitrate, Sulfate)  
 (6)Gamma Spectroscopy (Europium-155, Cesium-137, Europium-154, Europium-152) Gamma Spec - Add-on (Strontium-85)  
 (7)Americium-241 (Americium-241) Isotopic Plutonium; Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238) Strontium-89,90 -- Total Sr;

N1

**ORIGINAL**

P&D SUBMITTAL

JUNE 28, 2011

REVISION

<b>COLLECTOR</b> D. J. Spotts		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>		<b>F10-088-018</b>		<b>PAGE 1 OF 2</b>	
<b>COMPANY CONTACT</b> HIATT CAOILE, C		<b>TELEPHONE NO.</b> 373-7991		<b>PROJECT COORDINATOR</b> WIDRIG, DL		<b>PRICE CODE</b> 8B	
<b>PROJECT DESIGNATION</b> 600-262 Waste Sites Sampling and Analysis - Soil		<b>SAF NO.</b> F10-088		<b>COA</b> 302110ES10		<b>AIR QUALITY</b> <input type="checkbox"/>	
<b>FIELD LOGBOOK NO.</b> HNF-N-507-8		<b>ACTUAL SAMPLE DEPTH</b> 8'4"		<b>BILL OF LADING/AIR BILL NO.</b> N/A		<b>METHOD OF SHIPMENT</b> GOVERNMENT VEHICLE	
<b>OFFSITE PROPERTY NO.</b> N/A		<b>COOL &lt;-7C and &gt;-20C</b> aGS*		<b>COOL-&gt;4C</b> G/P		<b>None</b>	
<b>PRESERVATION</b>		<b>COOL-&gt;4C</b> G/P		<b>COOL-&gt;4C</b> G/P		<b>None</b>	
<b>TYPE OF CONTAINER</b>		<b>COOL-&gt;4C</b> G/P		<b>COOL-&gt;4C</b> G/P		<b>None</b>	
<b>NO. OF CONTAINER(S)</b>		<b>COOL-&gt;4C</b> 1		<b>COOL-&gt;4C</b> 1		<b>None</b>	
<b>VOLUME</b>		<b>COOL-&gt;4C</b> 40mL		<b>COOL-&gt;4C</b> 250mL		<b>500mL</b>	
<b>SAMPLE ANALYSIS</b>		<b>COOL-&gt;4C</b> 120mL		<b>COOL-&gt;4C</b> 60mL		<b>60mL</b>	
<b>SPECIAL HANDLING AND/OR STORAGE</b>		<b>COOL-&gt;4C</b> SEE ITEM (1) IN SPECIAL INSTRUCTIONS		<b>COOL-&gt;4C</b> SEE ITEM (2) IN SPECIAL INSTRUCTIONS		<b>COOL-&gt;4C</b> SEE ITEM (3) IN SPECIAL INSTRUCTIONS	
<b>SAMPLE NO.</b>		<b>MATRIX*</b>		<b>SAMPLE DATE</b>		<b>SAMPLE TIME</b>	
B2840		SOIL		FEB 07 2010		1040	
<b>CHAIN OF POSSESSION</b>		<b>SIGN/ PRINT NAMES</b>		<b>SPECIAL INSTRUCTIONS</b>		<b>SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS</b>	
<b>RELINQUISHED BY/REMOVED FROM</b> D. J. Spotts		<b>DATE/TIME</b> FEB 07 2010 1400		<b>RECEIVED BY/STORED IN</b> [Signature]		<b>DATE/TIME</b> FEB 02 2010 1400	
<b>RELINQUISHED BY/REMOVED FROM</b> SSU #1		<b>DATE/TIME</b> FEB 04 2010		<b>RECEIVED BY/STORED IN</b> DR Williamson		<b>DATE/TIME</b> FEB 04 2010	
<b>RELINQUISHED BY/REMOVED FROM</b> DR Williamson		<b>DATE/TIME</b> FEB 04 2010		<b>RECEIVED BY/STORED IN</b> Fed Ex		<b>DATE/TIME</b> FEB 04 2010	
<b>RELINQUISHED BY/REMOVED FROM</b> Fed Ex		<b>DATE/TIME</b> FEB 04 2010		<b>RECEIVED BY/STORED IN</b> [Signature]		<b>DATE/TIME</b> 2-5-10 9:30	
<b>RELINQUISHED BY/REMOVED FROM</b>		<b>DATE/TIME</b>		<b>RECEIVED BY/STORED IN</b>		<b>DATE/TIME</b>	
<b>RELINQUISHED BY/REMOVED FROM</b>		<b>DATE/TIME</b>		<b>RECEIVED BY/STORED IN</b>		<b>DATE/TIME</b>	
<b>RELINQUISHED BY/REMOVED FROM</b>		<b>DATE/TIME</b>		<b>RECEIVED BY/STORED IN</b>		<b>DATE/TIME</b>	
<b>LABORATORY SECTION</b>		<b>RECEIVED BY</b>		<b>TITLE</b>		<b>DATE/TIME</b>	
<b>FINAL SAMPLE DISPOSITION</b>		<b>DISPOSAL METHOD</b>		<b>DISPOSED BY</b>		<b>DATE/TIME</b>	

ORIGINAL

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F10-088-018	PAGE 2 OF 2
COLLECTOR	HIATT CAOLLE, C	TELEPHONE NO.	373-7991	PROJECT COORDINATOR	WDRUG, DL
SAMPLING LOCATION	600-262; Test Crb Box 2 - 8 ft. hys.	PROJECT DESIGNATION	600-262 Waste Sites Sampling and Analysis - Soil	PRICE CODE	8B
ICE CHEST NO.	<i>ATF 5240 Gwscose</i>	FIELD LOGBOOK NO.	<i>HNF-N-507-8</i>	AIR QUALITY	<input type="checkbox"/>
SHIPPED TO	<i>TASL #23-10</i>	ACTUAL SAMPLE DEPTH	<i>8'4"</i>	METHOD OF SHIPMENT	GOVERNMENT VEHICLE
<i>Waste Sampling &amp; Characterization #23-10</i>		OFFSITE PROPERTY NO.	N/A	BILL OF LADING/AIR BILL NO.	
				N/A	

**SPECIAL INSTRUCTIONS**

- \*\* The CACN for all analytical work at WSCF laboratory is 401352ES20.
- \*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
- \*\* All VOA samples will be collected using EPA Method 5035A.
- \*\* VOA sample bottle sets will include 5 bottles for low level analysis.
- \*\* The laboratory is to use one of the low level VOA bottles for moisture content determination.
- \*\* VOA bottles will be labeled with an appended suffix of K, L, M, N, or P for low level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be include as part of the sample ID reported in the final data packages.
- (1)VOA - 5035/8260 (LOW LEVEL) (Carbon tetrachloride)
- (2)Semi-VOA - 8270B (TC) (Dibenz[a,h]anthracene, Fluorene, Benzo(b)fluoranthene, Benzo(a)anthracene, Phenanthrene, Benzo(a)pyrene, Fluoranthene, Benzo(a)pyrene, Anthracene, Pyrene, Benzo(k)fluoranthene, Acenaphthene, Naphthalene, Chrysene, Indeno(1,2,3-cd)pyrene, Acenaphthylene), TPH-DieselKerosene Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - Kerosene range)
- (3)ICP/MS - 200.8 (TAL) (Antimony, Barium, Chromium, Cobalt, Cadmium, Copper, Zinc, Manganese, Nickel, Vanadium, Silver) ICP/MS - 200.8 (Add-on) {Arsenic, Lead, Tin, Strontium, Thallium, Uranium, Selenium} ICP Metals - 6010B (Add-On) {Boron, Beryllium, Lithium} 200.8\_HG - ICPMS {Mercury}
- (4)PCBs - 8082 {Aroclor-1260, Aroclor-1254, Aroclor-1242, Aroclor-1232, Aroclor-1016, Aroclor-1248}
- (5)IC Anions - 300.0 {Phosphorus in phosphate, Chloride, Bromide, Nitrogen in Nitrate, Fluoride, Nitrogen in Nitrate, Sulfate}
- (6)Gamma Spectroscopy {Europium-155, Cesium-137, Europium-152} Gamma Spec - Add-on {Strontium-85}
- (7)Americium-241 {Americium-241} Isotopic Plutonium; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238} Strontium-89,90 -- Total Sr;

**ORIGINAL**

A-6003-618(01/06)



Detailed Results

Tracking no.: 798364250810

Select time format: 12H

**Delivered**

**Delivered**  
Signed for by: B.DANIELS

Shipment Dates

Destination

Ship date Feb 4, 2010  
Delivery date Feb 5, 2010 9:13 AM

EARTH CITY, MO  
Signature Proof of Delivery

Shipment Facts

Service type	Priority Overnight	Delivered to	Shipping/Receiving
Weight	48.0 lbs/21.8 kg	Reference	GWSC-058

Shipment Travel History

Select time zone: Local Scan Time

All shipment travel activity is displayed in local time for the location

Date/Time	Activity	Location	Details
Feb 5, 2010 9:13 AM	Delivered	EARTH CITY, MO	
Feb 5, 2010 7:17 AM	On FedEx vehicle for delivery	EARTH CITY, MO	
Feb 5, 2010 7:11 AM	At local FedEx facility	EARTH CITY, MO	
Feb 5, 2010 5:35 AM	At dest sort facility	BERKELEY, MO	
Feb 5, 2010 4:46 AM	Departed FedEx location	MEMPHIS, TN	
Feb 5, 2010 12:52 AM	Arrived at FedEx location	MEMPHIS, TN	
Feb 4, 2010 5:07 PM	Left FedEx origin facility	PASCO, WA	
Feb 4, 2010 4:04 PM	Picked up	PASCO, WA	
Feb 4, 2010 3:10 PM	Shipment information sent to FedEx		



Detailed Results

Tracking no.: 793243127806 Select time format: 12H

---

**Delivered** **Delivered**  
Signed for by: B.DANIELS

Shipment Dates	Destination
Ship date Feb 4, 2010	EARTH CITY, MO
Delivery date Feb 5, 2010 9:13 AM	Signature Proof of Delivery

**Shipment Facts**

Service type	Priority Overnight	Delivered to	Shipping/Receiving
Weight	30.0 lbs/13.6 kg	Reference	GWS-055

**Shipment Travel History**

Select time zone: Local Scan Time

All shipment travel activity is displayed in local time for the location

Date/Time	Activity	Location	Details
Feb 5, 2010 9:13 AM	Delivered	EARTH CITY, MO	
Feb 5, 2010 7:12 AM	On FedEx vehicle for delivery	EARTH CITY, MO	
Feb 5, 2010 7:05 AM	At local FedEx facility	EARTH CITY, MO	
Feb 5, 2010 5:35 AM	At dest sort facility	BERKELEY, MO	
Feb 5, 2010 4:46 AM	Departed FedEx location	MEMPHIS, TN	
Feb 5, 2010 12:52 AM	Arrived at FedEx location	MEMPHIS, TN	
Feb 4, 2010 5:07 PM	Left FedEx origin facility	PASCO, WA	
Feb 4, 2010 4:04 PM	Picked up	PASCO, WA	
Feb 4, 2010 3:11 PM	Shipment information sent to FedEx		



THE LEADER IN ENVIRONMENTAL TESTING

Lot # ONE F08030582 407, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420  
 589- 409, 416, 420  
 610 404 - 410, 417  
 406 - 411, 418  
 408 - 413, 419

CONDITION UPON RECEIPT FORM

Client: CHMRC

Quote No: 85253, 85257, 84392, 85255

COC/RFA No: Below

Initiated By: AB Date: 2-5-10 Time: 9:30

Shipping Information

Shipper: FedEx UPS DHL Courier Client Other: \_\_\_\_\_ Multiple Packages: Y N

Shipping # (s):*	Sample Temperature (s):**
1. <u>7983 6171 2571</u>	1. <u>6</u>
2. <u>16520 2068</u>	2. <u>5</u>
3. <u>7932 4307 6385</u>	3. <u>5</u>
4. <u>4308 8908</u>	4. <u>2</u>
5. <u>7983 6449 16852</u>	5. <u>2</u>
6. <u>7983 6515 0251</u>	6. <u>6</u>
7. <u>7932 4330 0047</u>	7. <u>2</u>
8. <u>4312 7806</u>	8. <u>5</u>
9. <u>7983 6423 4891</u>	9. <u>5</u>
10. <u>7983 6425 0810</u>	10. <u>6</u>

\*Numbered shipping lines correspond to Numbered Sample Temp lines

\*\*Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid or Rad tests- Liquid or Solids

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <u>Y</u> N	Are there custody seals present on the cooler?	8. <u>Y</u> N	Are there custody seals present on bottles?
2. Y <u>Q</u> N/A	Do custody seals on cooler appear to be tampered with?	9. Y <u>Q</u> N/A	Do custody seals on bottles appear to be tampered with?
3. <u>Y</u> N	Were contents of cooler frisked after opening, but before unpacking?	10. <u>Y</u> N N/A	Was sample received with proper pH? (If not, make note below)
4. <u>Y</u> N	Sample received with Chain of Custody?	11. <u>Y</u> N	Sample received in proper containers?
5. <u>Y</u> N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. Y <u>Q</u> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
6. <u>Y</u> N	Was sample received broken?	13. Y N <u>Q</u> N/A	Was Internal COC/Workshare received?
7. <u>Y</u> N	Is sample volume sufficient for analysis?	14. Y N <u>Q</u> N/A	Was pH taken by original TestAmerica lab?

<sup>1</sup> For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX and soils.

Notes: COC- F10-088-012; -013; -014; -015; -016; -017; 018  
F10-098-003; -001 F10-120-002 F10-089-009  
F10-029-033; -034; 035; -036; -037; -038; -060; -061-062; 063; 064  
F09-067-370; -337  
F10-106-005; 004; 006; 10-001  
D10-005-001; D10-006-001; D10-003-001; D10-004-001  
F10-021-025  
X-10-009-4; S10-001-286; X10-030-4  
\* received 823 NFL6 (1x6) broken

Corrective Action:

- Client Contact Name: \_\_\_\_\_
- Sample(s) processed "as is"
- Sample(s) on hold until: \_\_\_\_\_
- Project Management Review: Michelle

Informed by: \_\_\_\_\_

If released, notify: \_\_\_\_\_ Date: 02-09-10

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

# GC/MS VOLATILES

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N34

GC/MS Volatiles

Lot-Sample #....: F0B050589-001    Work Order #....: LVCEH1AD    Matrix.....: SOLID  
 Date Sampled....: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/09/10    Analysis Date...: 02/09/10  
 Prep Batch #....: 0040348  
 Dilution Factor: 1  
 % Moisture.....: 4.6    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Carbon tetrachloride	ND	5.2	ug/kg	0.32
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
Toluene-d8	98	(72 - 136)		
Dibromofluoromethane	93	(76 - 130)		
1,2-Dichloroethane-d4	106	(73 - 148)		
4-Bromofluorobenzene	106	(59 - 150)		

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

B23N34

GC/MS Volatiles

Lot-Sample #: FOB050589-001

Work Order #: LVCEH1AD

Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
None				ug/kg

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N35

GC/MS Volatiles

Lot-Sample #...: F0B050589-002    Work Order #...: LVCEM1AP    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/09/10    Analysis Date...: 02/09/10  
 Prep Batch #...: 0040348  
 Dilution Factor: 1  
 % Moisture.....: 18    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Carbon tetrachloride	ND	6.1	ug/kg	0.37

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	115	(72 - 136)
Dibromofluoromethane	103	(76 - 130)
1,2-Dichloroethane-d4	121	(73 - 148)
4-Bromofluorobenzene	133	(59 - 150)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

B23N35

GC/MS Volatiles

Lot-Sample #: F0B050589-002

Work Order #: LVCEM1AP

Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
None				ug/kg

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N36

GC/MS Volatiles

Lot-Sample #...: F0B050589-003    Work Order #...: LVCEN1AP    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/09/10    Analysis Date...: 02/09/10  
 Prep Batch #...: 0040348  
 Dilution Factor: 1  
 % Moisture.....: 22    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Carbon tetrachloride	ND	6.4	ug/kg	0.39
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
Toluene-d8	103	(72 - 136)		
Dibromofluoromethane	92	(76 - 130)		
1,2-Dichloroethane-d4	110	(73 - 148)		
4-Bromofluorobenzene	109	(59 - 150)		

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

B23N36

GC/MS Volatiles

Lot-Sample #: F0B050589-003

Work Order #: LVCEN1AP

Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
None				ug/kg

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N37

GC/MS Volatiles

Lot-Sample #...: F0B050589-004    Work Order #...: LVCEP1AP    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/09/10    Analysis Date...: 02/09/10  
 Prep Batch #...: 0040348  
 Dilution Factor: 1  
 % Moisture.....: 7.0    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Carbon tetrachloride	ND	5.4	ug/kg	0.32

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	102	(72 - 136)
Dibromofluoromethane	99	(76 - 130)
1,2-Dichloroethane-d4	107	(73 - 148)
4-Bromofluorobenzene	108	(59 - 150)

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

B23N37

GC/MS Volatiles

Lot-Sample #: FOB050589-004

Work Order #: LVCEP1AP

Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
None				ug/kg

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N38

GC/MS Volatiles

Lot-Sample #...: F0B050589-005    Work Order #...: LVCEQ2AP    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/10/10    Analysis Date...: 02/10/10  
 Prep Batch #...: 0041275  
 Dilution Factor: 1  
 % Moisture.....: 7.1    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Carbon tetrachloride	ND	5.4	ug/kg	0.32

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	101	(72 - 136)
Dibromofluoromethane	99	(76 - 130)
1,2-Dichloroethane-d4	107	(73 - 148)
4-Bromofluorobenzene	108	(59 - 150)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

B23N38

GC/MS Volatiles

Lot-Sample #: FOB050589-005

Work Order #: LVCEQ2AP

Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
None				ug/kg

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N39

GC/MS Volatiles

Lot-Sample #....: FOB050589-006    Work Order #....: LVCET1AP    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/09/10    Analysis Date...: 02/09/10  
 Prep Batch #....: 0040348  
 Dilution Factor: 1  
 % Moisture.....: 2.3    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Carbon tetrachloride	ND	5.1	ug/kg	0.31
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
Toluene-d8	97	(72 - 136)		
Dibromofluoromethane	102	(76 - 130)		
1,2-Dichloroethane-d4	166 *	(73 - 148)		
4-Bromofluorobenzene	105	(59 - 150)		

**NOTE(S) :**

\* Surrogate recovery is outside stated control limits.  
 Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

B23N39

GC/MS Volatiles

Lot-Sample #: F0B050589-006

Work Order #: LVCET1AP

Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
None				ug/kg

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N40

GC/MS Volatiles

Lot-Sample #...: F0B050589-007    Work Order #...: LVCEV1AP    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/09/10    Analysis Date...: 02/09/10  
 Prep Batch #...: 0040348  
 Dilution Factor: 1  
 % Moisture.....: 1.9    Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Carbon tetrachloride	ND	5.1	ug/kg	0.31
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
Toluene-d8	97	(72 - 136)		
Dibromofluoromethane	82	(76 - 130)		
1,2-Dichloroethane-d4	105	(73 - 148)		
4-Bromofluorobenzene	102	(59 - 150)		

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

B23N40

GC/MS Volatiles

Lot-Sample #: FOB050589-007

Work Order #: LVCEV1AP

Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
None				ug/kg

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F0B050589      Work Order #...: LVF3P1AA      Matrix.....: SOLID  
 MB Lot-Sample #: F0B090000-348  
 Analysis Date...: 02/09/10      Prep Date.....: 02/09/10  
 Dilution Factor: 1      Prep Batch #...: 0040348

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
Carbon tetrachloride	ND	5.0	ug/kg	SW846 8260B
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
Toluene-d8	102	(72 - 136)		
Dibromofluoromethane	96	(76 - 130)		
1,2-Dichloroethane-d4	104	(73 - 148)		
4-Bromofluorobenzene	106	(59 - 150)		

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

CH2M Hill Plateau Remediation DOE RL

Method Blank Report

GC/MS Volatiles

Lot-Sample #: F0B090000-348 B Work Order #: LVF3P1AA Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
None				ug/kg

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F0B050589      Work Order #...: LVHMJ1AA      Matrix.....: SOLID  
 MB Lot-Sample #: F0B100000-275  
 Prep Date.....: 02/10/10  
 Analysis Date...: 02/10/10      Prep Batch #...: 0041275  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Carbon tetrachloride	ND	5.0	ug/kg	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	103	(72 - 136)
Dibromofluoromethane	99	(76 - 130)
1,2-Dichloroethane-d4	109	(73 - 148)
4-Bromofluorobenzene	107	(59 - 150)

**NOTE (S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

CH2M Hill Plateau Remediation DOE RL

Method Blank Report

GC/MS Volatiles

Lot-Sample #: FOB100000-275 B Work Order #: LVHMJ1AA Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
None				ug/kg

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F0B050589      Work Order #...: LVF3P1AC-LCS      Matrix.....: SOLID  
 LCS Lot-Sample#: F0B090000-348      LVF3P1AD-LCSD  
 Prep Date.....: 02/09/10      Analysis Date...: 02/09/10  
 Prep Batch #...: 0040348  
 Dilution Factor: 1

PARAMETER	SPIKE	MEASURED	UNITS	PERCENT	RPD	METHOD
	AMOUNT	AMOUNT		RECOVERY		
Carbon tetrachloride	50.0	50.6	ug/kg	101		SW846 8260B
	50.0	53.7	ug/kg	107	5.9	SW846 8260B

SURROGATE	PERCENT RECOVERY	
	RECOVERY	LIMITS
Toluene-d8	96	(84 - 121)
	102	(84 - 121)
Dibromofluoromethane	96	(85 - 117)
	101	(85 - 117)
1,2-Dichloroethane-d4	103	(82 - 123)
	104	(82 - 123)
4-Bromofluorobenzene	98	(84 - 116)
	105	(84 - 116)

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F0B050589      Work Order #...: LVHMJ1AC-LCS      Matrix.....: SOLID  
 LCS Lot-Sample#: F0B100000-275      LVHMJ1AD-LCSD  
 Prep Date.....: 02/10/10      Analysis Date...: 02/10/10  
 Prep Batch #...: 0041275  
 Dilution Factor: 1

PARAMETER	SPIKE	MEASURED	UNITS	PERCENT	RPD	METHOD
	AMOUNT	AMOUNT		RECOVERY		
Carbon tetrachloride	50.0	50.1	ug/kg	100		SW846 8260B
	50.0	50.2	ug/kg	100	0.31	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	100	(84 - 121)
	99	(84 - 121)
Dibromofluoromethane	99	(85 - 117)
	96	(85 - 117)
1,2-Dichloroethane-d4	106	(82 - 123)
	103	(82 - 123)
4-Bromofluorobenzene	102	(84 - 116)
	102	(84 - 116)

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: FOB050589      Work Order #...: LVCEM1CJ-MS      Matrix.....: SOLID  
 MS Lot-Sample #: FOB050589-002      LVCEM1CK-MSD  
 Date Sampled...: 02/02/10      Date Received...: 02/05/10  
 Prep Date.....: 02/09/10      Analysis Date...: 02/09/10  
 Prep Batch #...: 0040348  
 Dilution Factor: 1      % Moisture.....: 18

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Carbon tetrachloride	ND	57.5	57.8	ug/kg	101		SW846 8260B
	ND	77.5	81.7	ug/kg	105	34	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	98	(72 - 136)
	99	(72 - 136)
Dibromofluoromethane	87	(76 - 130)
	89	(76 - 130)
1,2-Dichloroethane-d4	105	(73 - 148)
	104	(73 - 148)
4-Bromofluorobenzene	102	(59 - 150)
	103	(59 - 150)

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

# GC/MS SEMI-VOLATILES

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N34

GC/MS Semivolatiles

Lot-Sample #....: F0B050589-001    Work Order #....: LVCEH1AE    Matrix.....: SOLID  
 Date Sampled....: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/08/10  
 Prep Batch #....: 0039127  
 Dilution Factor: 1  
 % Moisture.....: 4.6    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Benzo(ghi)perylene	ND	350	ug/kg	35
Anthracene	ND	350	ug/kg	35
Fluoranthene	ND	350	ug/kg	35
Pyrene	ND	350	ug/kg	35
Benzo(a)anthracene	ND	350	ug/kg	35
Chrysene	ND	350	ug/kg	35
Benzo(b)fluoranthene	ND	350	ug/kg	35
Benzo(k)fluoranthene	ND	350	ug/kg	35
Benzo(a)pyrene	ND	350	ug/kg	35
Indeno(1,2,3-cd)pyrene	ND	350	ug/kg	35
Acenaphthene	ND	350	ug/kg	35
Fluorene	ND	350	ug/kg	35
Phenanthrene	ND	350	ug/kg	35
Naphthalene	ND	350	ug/kg	35
Acenaphthylene	ND	350	ug/kg	35
Dibenz(a,h)anthracene	ND	350	ug/kg	35

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Fluorophenol	71	(45 - 89 )
Phenol-d5	70	(50 - 88 )
Nitrobenzene-d5	68	(48 - 90 )
2-Fluorobiphenyl	73	(52 - 94 )
2,4,6-Tribromophenol	70	(46 - 106)
Terphenyl-d14	83	(34 - 107)

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

B23N34

GC/MS Semivolatiles

Lot-Sample #: FOB050589-001

Work Order #: LVCEH1AE

Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
Unknown aldol condensate		9700 J	M 3.745	ug/kg
Unknown alkane		150 J	M 11.869	ug/kg

NOTE(S) :

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N35

GC/MS Semivolatiles

Lot-Sample #...: F0B050589-002    Work Order #...: LVCEM1AQ    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/08/10  
 Prep Batch #...: 0039127  
 Dilution Factor: 1  
 % Moisture.....: 18    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Benzo (ghi) perylene	ND	400	ug/kg	41
Anthracene	ND	400	ug/kg	41
Fluoranthene	ND	400	ug/kg	41
Pyrene	ND	400	ug/kg	41
Benzo (a) anthracene	ND	400	ug/kg	41
Chrysene	ND	400	ug/kg	41
Benzo (b) fluoranthene	ND	400	ug/kg	41
Benzo (k) fluoranthene	ND	400	ug/kg	41
Benzo (a) pyrene	ND	400	ug/kg	41
Indeno (1, 2, 3-cd) pyrene	ND	400	ug/kg	41
Acenaphthene	ND	400	ug/kg	41
Fluorene	ND	400	ug/kg	41
Phenanthrene	ND	400	ug/kg	41
Naphthalene	ND	400	ug/kg	41
Acenaphthylene	ND	400	ug/kg	41
Dibenz (a, h) anthracene	ND	400	ug/kg	41

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Fluorophenol	67	(45 - 89 )
Phenol-d5	67	(50 - 88 )
Nitrobenzene-d5	64	(48 - 90 )
2-Fluorobiphenyl	63	(52 - 94 )
2,4,6-Tribromophenol	65	(46 - 106)
Terphenyl-d14	81	(34 - 107)

NOTE (S) :

Results and reporting limits have been adjusted for dry weight.

## CH2M Hill Plateau Remediation DOE RL

B23N35

## GC/MS Semivolatiles

Lot-Sample #: F0B050589-002

Work Order #: LVCEM1AQ

Matrix: SOLID

## MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
Unknown aldol condensate		12000 J	M 3.7288	ug/kg
Caprolactam	105-60-2	160 J	M 6.2106	ug/kg
Unknown		1300 J	M 6.8471	ug/kg
Hexadecanoic acid, 2-methylpro	110-34-9	1300 J	M 9.4305	ug/kg

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N36

GC/MS Semivolatiles

Lot-Sample #...: F0B050589-003    Work Order #...: LVCEN1AQ    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/08/10  
 Prep Batch #...: 0039127  
 Dilution Factor: 1  
 % Moisture.....: 22    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Benzo (ghi) perylene	ND	420	ug/kg	42
Anthracene	ND	420	ug/kg	42
Fluoranthene	ND	420	ug/kg	42
Pyrene	ND	420	ug/kg	42
Benzo (a) anthracene	ND	420	ug/kg	42
Chrysene	ND	420	ug/kg	42
Benzo (b) fluoranthene	ND	420	ug/kg	42
Benzo (k) fluoranthene	ND	420	ug/kg	42
Benzo (a) pyrene	ND	420	ug/kg	42
Indeno (1, 2, 3-cd) pyrene	ND	420	ug/kg	42
Acenaphthene	ND	420	ug/kg	42
Fluorene	ND	420	ug/kg	42
Phenanthrene	ND	420	ug/kg	42
Naphthalene	ND	420	ug/kg	42
Acenaphthylene	ND	420	ug/kg	42
Dibenz (a, h) anthracene	ND	420	ug/kg	42

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Fluorophenol	64	(45 - 89 )
Phenol-d5	62	(50 - 88 )
Nitrobenzene-d5	59	(48 - 90 )
2-Fluorobiphenyl	58	(52 - 94 )
2,4,6-Tribromophenol	63	(46 - 106)
Terphenyl-d14	76	(34 - 107)

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

## CH2M Hill Plateau Remediation DOE RL

B23N36

## GC/MS Semivolatiles

Lot-Sample #: FOB050589-003

Work Order #: LVCEN1AQ

Matrix: SOLID

## MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
Unknown aldol condensate		11000 J	M 3.7395	ug/kg
Unknown		830 J	M 6.8577	ug/kg
Hexadecanoic acid, 2-methylpro	110-34-9	6400 J	M 9.4465	ug/kg
Octadecanoic acid, 2-methylpro	646-13-9	4600 J	M 10.018	ug/kg
9-Octadecenamide, (z)-	301-02-0	230 J	M 10.125	ug/kg
13-Docosenamide, (z)-	112-84-5	320 J	M 11.484	ug/kg

**NOTE(S) :**

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N37

GC/MS Semivolatiles

Lot-Sample #....: FOB050589-004    Work Order #....: LVCEP1AQ    Matrix.....: SOLID  
 Date Sampled....: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/08/10  
 Prep Batch #....: 0039127  
 Dilution Factor: 1  
 % Moisture.....: 7.0    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Benzo(ghi)perylene	ND	350	ug/kg	36
Anthracene	ND	350	ug/kg	36
Fluoranthene	ND	350	ug/kg	36
Pyrene	ND	350	ug/kg	36
Benzo(a)anthracene	ND	350	ug/kg	36
Chrysene	ND	350	ug/kg	36
Benzo(b)fluoranthene	ND	350	ug/kg	36
Benzo(k)fluoranthene	ND	350	ug/kg	36
Benzo(a)pyrene	ND	350	ug/kg	36
Indeno(1,2,3-cd)pyrene	ND	350	ug/kg	36
Acenaphthene	ND	350	ug/kg	36
Fluorene	ND	350	ug/kg	36
Phenanthrene	ND	350	ug/kg	36
Naphthalene	ND	350	ug/kg	36
Acenaphthylene	ND	350	ug/kg	36
Dibenz(a,h)anthracene	ND	350	ug/kg	36

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Fluorophenol	69	(45 - 89 )
Phenol-d5	68	(50 - 88 )
Nitrobenzene-d5	66	(48 - 90 )
2-Fluorobiphenyl	68	(52 - 94 )
2,4,6-Tribromophenol	69	(46 - 106)
Terphenyl-d14	80	(34 - 107)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

B23N37

GC/MS Semivolatiles

Lot-Sample #: F0B050589-004

Work Order #: LVCEP1AQ

Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
Unknown		260 J	M 3.2152	ug/kg
Unknown aldol condensate		10000 J	M 3.7341	ug/kg

NOTE(S) :

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N38

GC/MS Semivolatiles

Lot-Sample #....: F0B050589-005    Work Order #....: LVCEQ1AQ    Matrix.....: SOLID  
 Date Sampled....: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/08/10  
 Prep Batch #....: 0039127  
 Dilution Factor: 1  
 % Moisture.....: 7.1    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo (ghi) perylene	ND	360	ug/kg	36
Anthracene	ND	360	ug/kg	36
Fluoranthene	ND	360	ug/kg	36
Pyrene	ND	360	ug/kg	36
Benzo (a) anthracene	ND	360	ug/kg	36
Chrysene	ND	360	ug/kg	36
Benzo (b) fluoranthene	ND	360	ug/kg	36
Benzo (k) fluoranthene	ND	360	ug/kg	36
Benzo (a) pyrene	ND	360	ug/kg	36
Indeno (1, 2, 3-cd) pyrene	ND	360	ug/kg	36
Acenaphthene	ND	360	ug/kg	36
Fluorene	ND	360	ug/kg	36
Phenanthrene	ND	360	ug/kg	36
Naphthalene	ND	360	ug/kg	36
Acenaphthylene	ND	360	ug/kg	36
Dibenz (a, h) anthracene	ND	360	ug/kg	36

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	71	(45 - 89 )
Phenol-d5	69	(50 - 88 )
Nitrobenzene-d5	66	(48 - 90 )
2-Fluorobiphenyl	69	(52 - 94 )
2,4,6-Tribromophenol	67	(46 - 106)
Terphenyl-d14	79	(34 - 107)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

## CH2M Hill Plateau Remediation DOE RL

B23N38

## GC/MS Semivolatiles

Lot-Sample #: FOB050589-005

Work Order #: LVCEQ1AQ

Matrix: SOLID

## MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
Unknown aldol condensate		9500 J	M 3.7394	ug/kg
Hexadecanoic acid, 2-methylpro	110-34-9	1400 J	M 9.4411	ug/kg

NOTE(S) :

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N39

GC/MS Semivolatiles

Lot-Sample #....: FOB050589-006    Work Order #....: LVCET1AQ    Matrix.....: SOLID  
 Date Sampled....: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/08/10  
 Prep Batch #....: 0039127  
 Dilution Factor: 1  
 % Moisture.....: 2.3    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Benzo (ghi) perylene	ND	340	ug/kg	34
Anthracene	ND	340	ug/kg	34
Fluoranthene	ND	340	ug/kg	34
Pyrene	ND	340	ug/kg	34
Benzo (a) anthracene	ND	340	ug/kg	34
Chrysene	ND	340	ug/kg	34
Benzo (b) fluoranthene	ND	340	ug/kg	34
Benzo (k) fluoranthene	ND	340	ug/kg	34
Benzo (a) pyrene	ND	340	ug/kg	34
Indeno (1, 2, 3-cd) pyrene	ND	340	ug/kg	34
Acenaphthene	ND	340	ug/kg	34
Fluorene	ND	340	ug/kg	34
Phenanthrene	ND	340	ug/kg	34
Naphthalene	ND	340	ug/kg	34
Acenaphthylene	ND	340	ug/kg	34
Dibenz (a, h) anthracene	ND	340	ug/kg	34

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Fluorophenol	70	(45 - 89 )
Phenol-d5	69	(50 - 88 )
Nitrobenzene-d5	67	(48 - 90 )
2-Fluorobiphenyl	70	(52 - 94 )
2,4,6-Tribromophenol	65	(46 - 106)
Terphenyl-d14	79	(34 - 107)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

## CH2M Hill Plateau Remediation DOE RL

B23N39

## GC/MS Semivolatiles

Lot-Sample #: FOB050589-006

Work Order #: LVCET1AQ

Matrix: SOLID

## MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
Unknown aldol condensate		10000 J	M 3.7343	ug/kg
Hexadecanoic acid, 2-methylpro	110-34-9	2400 J	M 9.4306	ug/kg

NOTE(S) :

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N40

GC/MS Semivolatiles

Lot-Sample #....: F0B050589-007    Work Order #....: LVCEV1AQ    Matrix.....: SOLID  
 Date Sampled....: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/09/10  
 Prep Batch #....: 0039127  
 Dilution Factor: 1  
 % Moisture.....: 1.9    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo (ghi) perylene	ND	340	ug/kg	34
Anthracene	ND	340	ug/kg	34
Fluoranthene	ND	340	ug/kg	34
Pyrene	ND	340	ug/kg	34
Benzo (a) anthracene	ND	340	ug/kg	34
Chrysene	ND	340	ug/kg	34
Benzo (b) fluoranthene	ND	340	ug/kg	34
Benzo (k) fluoranthene	ND	340	ug/kg	34
Benzo (a) pyrene	ND	340	ug/kg	34
Indeno (1, 2, 3-cd) pyrene	ND	340	ug/kg	34
Acenaphthene	ND	340	ug/kg	34
Fluorene	ND	340	ug/kg	34
Phenanthrene	ND	340	ug/kg	34
Naphthalene	ND	340	ug/kg	34
Acenaphthylene	ND	340	ug/kg	34
Dibenz (a, h) anthracene	ND	340	ug/kg	34

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	76	(45 - 89 )
Phenol-d5	73	(50 - 88 )
Nitrobenzene-d5	71	(48 - 90 )
2-Fluorobiphenyl	74	(52 - 94 )
2,4,6-Tribromophenol	68	(46 - 106)
Terphenyl-d14	81	(34 - 107)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

## CH2M Hill Plateau Remediation DOE RL

B23N40

## GC/MS Semivolatiles

Lot-Sample #: F0B050589-007

Work Order #: LVCEV1AQ

Matrix: SOLID

## MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
Unknown aldol condensate		11000 J	M 3.745	ug/kg
Unknown		150 J	M 9.4359	ug/kg

NOTE(S) :

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M: Result was measured against nearest internal standard assuming a response factor of 1.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: F0B050589      Work Order #...: LVEA81AA      Matrix.....: SOLID  
 MB Lot-Sample #: F0B080000-127  
 Prep Date.....: 02/08/10  
 Analysis Date...: 02/08/10      Prep Batch #...: 0039127  
 Dilution Factor: 1

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Benzo(ghi)perylene	ND	330	ug/kg	SW846 8270C
Anthracene	ND	330	ug/kg	SW846 8270C
Fluoranthene	ND	330	ug/kg	SW846 8270C
Pyrene	ND	330	ug/kg	SW846 8270C
Benzo(a)anthracene	ND	330	ug/kg	SW846 8270C
Chrysene	ND	330	ug/kg	SW846 8270C
Benzo(b)fluoranthene	ND	330	ug/kg	SW846 8270C
Benzo(k)fluoranthene	ND	330	ug/kg	SW846 8270C
Benzo(a)pyrene	ND	330	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	330	ug/kg	SW846 8270C
Acenaphthene	ND	330	ug/kg	SW846 8270C
Fluorene	ND	330	ug/kg	SW846 8270C
Phenanthrene	ND	330	ug/kg	SW846 8270C
Naphthalene	ND	330	ug/kg	SW846 8270C
Acenaphthylene	ND	330	ug/kg	SW846 8270C
Dibenz(a,h)anthracene	ND	330	ug/kg	SW846 8270C

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Fluorophenol	74	(45 - 89)
Phenol-d5	73	(50 - 88)
Nitrobenzene-d5	68	(48 - 90)
2-Fluorobiphenyl	73	(52 - 94)
2,4,6-Tribromophenol	67	(46 - 106)
Terphenyl-d14	81	(34 - 107)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

CH2M Hill Plateau Remediation DOE RL

Method Blank Report

GC/MS Semivolatiles

Lot-Sample #: F0B080000-127 B Work Order #: LVEA81AA Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
Unknown aldol condensate		9400 J	M 3.7502	ug/kg

NOTE(S) :

M: Result was measured against nearest internal standard assuming a response factor of 1.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: FOB050589      Work Order #...: LVEA81AC      Matrix.....: SOLID  
 LCS Lot-Sample#: FOB080000-127  
 Prep Date.....: 02/08/10      Analysis Date...: 02/08/10  
 Prep Batch #...: 0039127  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
Benzo (ghi) perylene	3330	3210	ug/kg	96	SW846 8270C
Anthracene	3330	3050	ug/kg	92	SW846 8270C
Fluoranthene	3330	3050	ug/kg	92	SW846 8270C
Pyrene	3330	3110	ug/kg	93	SW846 8270C
Benzo (a) anthracene	3330	3340 T	ug/kg	100	SW846 8270C
Chrysene	3330	3000	ug/kg	90	SW846 8270C
Benzo (b) fluoranthene	3330	3160	ug/kg	95	SW846 8270C
Benzo (k) fluoranthene	3330	3300	ug/kg	99	SW846 8270C
Benzo (a) pyrene	3330	3140	ug/kg	94	SW846 8270C
Indeno (1,2,3-cd) pyrene	3330	2670	ug/kg	80	SW846 8270C
Acenaphthene	3330	2900	ug/kg	87	SW846 8270C
Fluorene	3330	3000	ug/kg	90	SW846 8270C
Phenanthrene	3330	3060	ug/kg	92	SW846 8270C
Naphthalene	3330	2650	ug/kg	79	SW846 8270C
Acenaphthylene	3330	2940	ug/kg	88	SW846 8270C
Dibenz (a,h) anthracene	3330	3090	ug/kg	93	SW846 8270C

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorophenol	71	(56 - 89)
Phenol-d5	77	(58 - 90)
Nitrobenzene-d5	74	(56 - 92)
2-Fluorobiphenyl	81	(58 - 95)
2,4,6-Tribromophenol	75	(56 - 105)
Terphenyl-d14	78	(44 - 108)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

T Spike sample recovery is outside control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: F0B050589      Work Order #...: LVCEM1CL-MS      Matrix.....: SOLID  
 MS Lot-Sample #: F0B050589-002      LVCEM1CM-MSD  
 Date Sampled...: 02/02/10      Date Received...: 02/05/10  
 Prep Date.....: 02/08/10      Analysis Date...: 02/08/10  
 Prep Batch #...: 0039127  
 Dilution Factor: 1      % Moisture.....: 18

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(ghi)perylene	ND	4060	3650	ug/kg	90		SW846 8270C
	ND	4060	3790	ug/kg	93	3.9	SW846 8270C
Anthracene	ND	4060	3400	ug/kg	84		SW846 8270C
	ND	4060	3560	ug/kg	88	4.6	SW846 8270C
Fluoranthene	ND	4060	3370	ug/kg	83		SW846 8270C
	ND	4060	3550	ug/kg	88	5.2	SW846 8270C
Pyrene	ND	4060	3490	ug/kg	86		SW846 8270C
	ND	4060	3600	ug/kg	89	3.0	SW846 8270C
Benzo(a)anthracene	ND	4060	3750	ug/kg	92		SW846 8270C
	ND	4060	3890	ug/kg	96	3.9	SW846 8270C
Chrysene	ND	4060	3470	ug/kg	85		SW846 8270C
	ND	4060	3540	ug/kg	87	2.0	SW846 8270C
Benzo(b)fluoranthene	ND	4060	3680	ug/kg	91		SW846 8270C
	ND	4060	3610	ug/kg	89	1.7	SW846 8270C
Benzo(k)fluoranthene	ND	4060	3540	ug/kg	87		SW846 8270C
	ND	4060	3830	ug/kg	94	7.9	SW846 8270C
Benzo(a)pyrene	ND	4060	3510	ug/kg	87		SW846 8270C
	ND	4060	3680	ug/kg	91	4.5	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	4060	3240	ug/kg	80		SW846 8270C
	ND	4060	3240	ug/kg	80	0.15	SW846 8270C
Acenaphthene	ND	4060	3040	ug/kg	75		SW846 8270C
	ND	4060	3310	ug/kg	81	8.4	SW846 8270C
Fluorene	ND	4060	3300	ug/kg	81		SW846 8270C
	ND	4060	3490	ug/kg	86	5.5	SW846 8270C
Phenanthrene	ND	4060	3350	ug/kg	83		SW846 8270C
	ND	4060	3490	ug/kg	86	4.1	SW846 8270C
Naphthalene	ND	4060	2550	ug/kg	63		SW846 8270C
	ND	4060	2880	ug/kg	71	12	SW846 8270C
Acenaphthylene	ND	4060	3130	ug/kg	77		SW846 8270C
	ND	4060	3350	ug/kg	83	6.9	SW846 8270C
Dibenz(a,h)anthracene	ND	4060	3550	ug/kg	87		SW846 8270C
	ND	4060	3650	ug/kg	90	2.8	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	67	(45 - 89)
	70	(45 - 89)
Phenol-d5	72	(50 - 88)
	75	(50 - 88)

(Continued on next page)

## MATRIX SPIKE SAMPLE DATA REPORT

## GC/MS Semivolatiles

Client Lot #...: F0B050589      Work Order #...: LVCEM1CL-MS      Matrix.....: SOLID  
MS Lot-Sample #: F0B050589-002      LVCEM1CM-MSD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Nitrobenzene-d5	70	(48 - 90)
	73	(48 - 90)
2-Fluorobiphenyl	75	(52 - 94)
	80	(52 - 94)
2,4,6-Tribromophenol	71	(46 - 106)
	74	(46 - 106)
Terphenyl-d14	74	(34 - 107)
	78	(34 - 107)

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

# TPH Diesel

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N34

GC Semivolatiles

Lot-Sample #...: F0B050589-001    Work Order #...: LVCEH1AF    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/11/10  
 Prep Batch #...: 0039128  
 Dilution Factor: 1  
 % Moisture.....: 4.6    Method.....: SW846 8015 MOD

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Kerosene	ND	26	mg/kg	0.35
TPH - Diesel Range - WTPH-D	ND	26	mg/kg	0.35
		PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS		
o-Terphenyl	90	(70 - 150)		

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N35

GC Semivolatiles

Lot-Sample #....: FOB050589-002    Work Order #....: LVCEM1AR    Matrix.....: SOLID  
 Date Sampled....: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/11/10  
 Prep Batch #....: 0039128  
 Dilution Factor: 1  
 % Moisture.....: 18    Method.....: SW846 8015 MOD

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Kerosene	ND	30	mg/kg	0.41
TPH - Diesel Range - WTPH-D	ND	30	mg/kg	0.41

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
o-Terphenyl	90	(70 - 150)

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N36

GC Semivolatiles

Lot-Sample #...: F0B050589-003    Work Order #...: LVCEN1AR    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/11/10  
 Prep Batch #...: 0039128  
 Dilution Factor: 1  
 % Moisture.....: 22    Method.....: SW846 8015 MOD

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Kerosene	ND	32	mg/kg	0.42
TPH - Diesel Range - WTPH-D	ND	32	mg/kg	0.42
SURROGATE	PERCENT	RECOVERY		
	RECOVERY	LIMITS		
o-Terphenyl	99	(70 - 150)		

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N37

GC Semivolatiles

Lot-Sample #....: FOB050589-004    Work Order #....: LVCEP1AR    Matrix.....: SOLID  
 Date Sampled....: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/11/10  
 Prep Batch #....: 0039128  
 Dilution Factor: 1  
 % Moisture.....: 7.0    Method.....: SW846 8015 MOD

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Kerosene	ND	27	mg/kg	0.36
TPH - Diesel Range - WTPH-D	ND	27	mg/kg	0.36
		PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS		
o-Terphenyl	99	(70 - 150)		

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N38

GC Semivolatiles

Lot-Sample #...: F0B050589-005    Work Order #...: LVCEQ1AR    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/11/10  
 Prep Batch #...: 0039128  
 Dilution Factor: 1  
 % Moisture.....: 7.1    Method.....: SW846 8015 MOD

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Kerosene	ND	27	mg/kg	0.36
TPH - Diesel Range - WTPH-D	ND	27	mg/kg	0.36
		PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS		
o-Terphenyl	88	(70 - 150)		

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N39

GC Semivolatiles

Lot-Sample #...: F0B050589-006    Work Order #...: LVCET1AR    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/11/10  
 Prep Batch #...: 0039128  
 Dilution Factor: 1  
 % Moisture.....: 2.3    Method.....: SW846 8015 MOD

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Kerosene	ND	26	mg/kg	0.34
TPH - Diesel Range - WTPH-D	ND	26	mg/kg	0.34
SURROGATE	PERCENT	RECOVERY		
	RECOVERY	LIMITS		
o-Terphenyl	96	(70 - 150)		

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N40

GC Semivolatiles

Lot-Sample #....: F0B050589-007    Work Order #....: LVCEV1AR    Matrix.....: SOLID  
 Date Sampled....: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/11/10  
 Prep Batch #....: 0039128  
 Dilution Factor: 1  
 % Moisture.....: 1.9    Method.....: SW846 8015 MOD

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Kerosene	ND	25	mg/kg	0.34
TPH - Diesel Range - WTPH-D	ND	25	mg/kg	0.34
	<u>PERCENT</u>	<u>RECOVERY</u>		
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>		
o-Terphenyl	99	(70 - 150)		

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: FOB050589      Work Order #...: LVECC1AA      Matrix.....: SOLID  
 MB Lot-Sample #: FOB080000-128  
 Prep Date.....: 02/08/10  
 Analysis Date...: 02/11/10      Prep Batch #...: 0039128  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
Kerosene	ND	25	mg/kg	SW846 8015 MOD
TPH - Diesel Range - WTPH	ND	25	mg/kg	SW846 8015 MOD
	<u>PERCENT</u>	<u>RECOVERY</u>		
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>		
o-Terphenyl	83	(70 - 150)		

**NOTE (S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: F0B050589      Work Order #...: LVECC1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: F0B080000-128  
 Prep Date.....: 02/08/10      Analysis Date...: 02/11/10  
 Prep Batch #...: 0039128  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>METHOD</u>
TPH - Diesel Range - WTPH	83.3	90.6	mg/kg	109	SW846 8015 MO
<u>SURROGATE</u>		<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>		
o-Terphenyl		167 *	(30 - 150)		

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

\* Surrogate recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #....: F0B050589      Work Order #....: LVCEN1CJ-MS      Matrix.....: SOLID  
 MS Lot-Sample #: F0B050589-003      LVCEN1CK-MSD  
 Date Sampled...: 02/02/10      Date Received...: 02/05/10  
 Prep Date.....: 02/08/10      Analysis Date...: 02/11/10  
 Prep Batch #....: 0039128  
 Dilution Factor: 1      % Moisture.....: 22

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
TPH - Diesel Range - WTPH	ND	106	103	mg/kg	97		SW846 8015 MOD
	ND	106	108	mg/kg	101	5.0	SW846 8015 MOD

SURROGATE	PERCENT		RECOVERY
	RECOVERY	LIMITS	LIMITS
o-Terphenyl	129	(70 - 150)	(70 - 150)
	153 *	(70 - 150)	(70 - 150)

**NOTE(S) :**

- Calculations are performed before rounding to avoid round-off errors in calculated results.
- Bold print denotes control parameters
- Results and reporting limits have been adjusted for dry weight.
- \* Surrogate recovery is outside stated control limits.

# PCBs

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N34

GC Semivolatiles

Lot-Sample #...: FOB050589-001    Work Order #...: LVCEH1AG    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/08/10  
 Prep Batch #...: 0039129  
 Dilution Factor: 1  
 % Moisture.....: 4.6    Method.....: SW846 8082

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Aroclor 1016	ND	35	ug/kg	3.4
Aroclor 1221	ND	35	ug/kg	3.4
Aroclor 1232	ND	35	ug/kg	3.4
Aroclor 1242	ND	35	ug/kg	3.4
Aroclor 1248	ND	35	ug/kg	3.4
Aroclor 1254	53	35	ug/kg	2.7
Aroclor 1260	ND	35	ug/kg	2.7

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	96	(49 - 150)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N35

GC Semivolatiles

Lot-Sample #...: F0B050589-002    Work Order #...: LVCEM1AT    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/08/10  
 Prep Batch #...: 0039129  
 Dilution Factor: 1  
 % Moisture.....: 18    Method.....: SW846 8082

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Aroclor 1016	ND	40	ug/kg	4.0
Aroclor 1221	ND	40	ug/kg	4.0
Aroclor 1232	ND	40	ug/kg	4.0
Aroclor 1242	ND	40	ug/kg	4.0
Aroclor 1248	ND	40	ug/kg	4.0
Aroclor 1254	36 J	40	ug/kg	3.1
Aroclor 1260	ND	40	ug/kg	3.1

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	109	(49 - 150)

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.  
 J Estimated result. Result is less than RL.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N36

GC Semivolatiles

Lot-Sample #....: F0B050589-003    Work Order #...: LVCEN1AT    Matrix.....: SOLID  
 Date Sampled....: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/08/10  
 Prep Batch #....: 0039129  
 Dilution Factor: 1  
 % Moisture.....: 22    Method.....: SW846 8082

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Aroclor 1016	ND	42	ug/kg	4.1
Aroclor 1221	ND	42	ug/kg	4.1
Aroclor 1232	ND	42	ug/kg	4.1
Aroclor 1242	ND	42	ug/kg	4.1
Aroclor 1248	ND	42	ug/kg	4.1
Aroclor 1254	ND	42	ug/kg	3.2
Aroclor 1260	ND	42	ug/kg	3.2

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	104	(49 - 150)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N37

GC Semivolatiles

Lot-Sample #...: FOB050589-004    Work Order #...: LVCEP1AT    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/08/10  
 Prep Batch #...: 0039129  
 Dilution Factor: 1  
 % Moisture.....: 7.0    Method.....: SW846 8082

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Aroclor 1016	ND	35	ug/kg	3.5
Aroclor 1221	ND	35	ug/kg	3.5
Aroclor 1232	ND	35	ug/kg	3.5
Aroclor 1242	ND	35	ug/kg	3.5
Aroclor 1248	ND	35	ug/kg	3.5
Aroclor 1254	ND	35	ug/kg	2.7
Aroclor 1260	ND	35	ug/kg	2.7

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	107	(49 - 150)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N38

GC Semivolatiles

Lot-Sample #...: F0B050589-005    Work Order #...: LVCEQ1AT    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/08/10  
 Prep Batch #...: 0039129  
 Dilution Factor: 1  
 % Moisture.....: 7.1    Method.....: SW846 8082

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Aroclor 1016	ND	36	ug/kg	3.5
Aroclor 1221	ND	36	ug/kg	3.5
Aroclor 1232	ND	36	ug/kg	3.5
Aroclor 1242	ND	36	ug/kg	3.5
Aroclor 1248	ND	36	ug/kg	3.5
Aroclor 1254	ND	36	ug/kg	2.7
Aroclor 1260	ND	36	ug/kg	2.7

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	111	(49 - 150)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N39

GC Semivolatiles

Lot-Sample #....: FOB050589-006    Work Order #....: LVCET1AT    Matrix.....: SOLID  
 Date Sampled....: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/08/10  
 Prep Batch #....: 0039129  
 Dilution Factor: 1  
 % Moisture.....: 2.3    Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aroclor 1016	ND	34	ug/kg	3.3
Aroclor 1221	ND	34	ug/kg	3.3
Aroclor 1232	ND	34	ug/kg	3.3
Aroclor 1242	ND	34	ug/kg	3.3
Aroclor 1248	ND	34	ug/kg	3.3
Aroclor 1254	ND	34	ug/kg	2.6
Aroclor 1260	ND	34	ug/kg	2.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	106	(49 - 150)

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N40

GC Semivolatiles

Lot-Sample #...: F0B050589-007    Work Order #...: LVCEV1AT    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 Prep Date.....: 02/08/10    Analysis Date...: 02/08/10  
 Prep Batch #...: 0039129  
 Dilution Factor: 1  
 % Moisture.....: 1.9    Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aroclor 1016	ND	34	ug/kg	3.3
Aroclor 1221	ND	34	ug/kg	3.3
Aroclor 1232	ND	34	ug/kg	3.3
Aroclor 1242	ND	34	ug/kg	3.3
Aroclor 1248	ND	34	ug/kg	3.3
Aroclor 1254	ND	34	ug/kg	2.6
Aroclor 1260	ND	34	ug/kg	2.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	124	(49 - 150)

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: F0B050589      Work Order #...: LVECD1AA      Matrix.....: SOLID  
 MB Lot-Sample #: F0B080000-129  
 Prep Date.....: 02/08/10  
 Analysis Date...: 02/08/10      Prep Batch #...: 0039129  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Decachlorobiphenyl	100	(49 - 150)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: FOB050589      Work Order #...: LVECD1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: FOB080000-129  
 Prep Date.....: 02/08/10      Analysis Date...: 02/08/10  
 Prep Batch #...: 0039129  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>METHOD</u>
Aroclor 1016	167	180	ug/kg	108	SW846 8082
Aroclor 1260	167	175	ug/kg	105	SW846 8082

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Decachlorobiphenyl	109	(72 - 140)

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: FOB050589      Work Order #...: LVCEP1CJ-MS      Matrix.....: SOLID  
 MS Lot-Sample #: FOB050589-004      LVCEP1CK-MSD  
 Date Sampled...: 02/02/10      Date Received...: 02/05/10  
 Prep Date.....: 02/08/10      Analysis Date...: 02/08/10  
 Prep Batch #...: 0039129  
 Dilution Factor: 1      % Moisture.....: 7.0

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
Aroclor 1016	ND	179	191	ug/kg	106		SW846 8082
	ND	179	194	ug/kg	108	1.6	SW846 8082
Aroclor 1260	ND	179	192	ug/kg	107		SW846 8082
	ND	179	190	ug/kg	106	1.1	SW846 8082

SURROGATE	PERCENT		RECOVERY
	RECOVERY		LIMITS
Decachlorobiphenyl	111		(49 - 150)
	105		(49 - 150)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

# METALS

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N34

TOTAL Metals

Lot-Sample #...: FCB050589-001  
 Date Sampled...: 02/02/10  
 % Moisture.....: 4.6

Date Received...: 02/05/10

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0039064						
Antimony	1.1	1.0	mg/kg	SW846 6010B	02/08-02/12/10	LVCEH1A6
		Dilution Factor: 1		MDL.....: 0.21		
Prep Batch #...: 0039073						
Silver	ND	1.0	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1AW
		Dilution Factor: 1		MDL.....: 0.25		
Arsenic	ND D	10.5	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1AH
		Dilution Factor: 10		MDL.....: 3.3		
Barium	53.9	5.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1AJ
		Dilution Factor: 1		MDL.....: 0.26		
Beryllium	0.22 B	0.52	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1AK
		Dilution Factor: 1		MDL.....: 0.18		
Boron	23.6 B, D, C <i>P.D. Mix 1/27/11 at 10/11</i>	105	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1AL
		Dilution Factor: 10		MDL.....: 15.7		
Cadmium	0.77	0.52	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1AM
		Dilution Factor: 1		MDL.....: 0.052		
Cobalt	7.1	5.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1AN
		Dilution Factor: 1		MDL.....: 0.98		
Chromium	11.5	1.0	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1A4
		Dilution Factor: 1		MDL.....: 0.32		
Copper	16.2	2.6	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1AP
		Dilution Factor: 1		MDL.....: 0.76		
Lithium	ND D	52.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1AR
		Dilution Factor: 10		MDL.....: 6.9		
Manganese	244	1.0	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1AT
		Dilution Factor: 1		MDL.....: 0.16		
Nickel	12.3	4.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1AU
		Dilution Factor: 1		MDL.....: 0.24		

(Continued on next page)

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N34

TOTAL Metals

Lot-Sample #...: FOB050589-001

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Lead	15.1 D	10.5	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1AQ
		Dilution Factor: 10		MDL.....: 1.8		
Selenium	ND D	15.7	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1AV
		Dilution Factor: 10		MDL.....: 3.0		
Tin	3.8 B	10.5	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1A1
		Dilution Factor: 1		MDL.....: 0.85		
Strontium	22.1 D	10.5	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1AX
		Dilution Factor: 10		MDL.....: 0.79		
Thallium	ND D	21.0	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1A0
		Dilution Factor: 10		MDL.....: 15.8		
Uranium	8.5 B	52.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1A5
		Dilution Factor: 1		MDL.....: 5.5		
Vanadium	34.3	5.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1A2
		Dilution Factor: 1		MDL.....: 1.3		
Zinc	251	5.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEH1A3
		Dilution Factor: 1		MDL.....: 2.1		
Prep Batch #...: 0040503						
Mercury	0.012 B	0.035	mg/kg	SW846 7471A	02/09-02/10/10	LVCEH1A7
		Dilution Factor: 1		MDL.....: 0.0052		

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

B Estimated result. Result is less than RL.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N35

TOTAL Metals

Lot-Sample #...: FOB050589-002

Matrix.....: SOLID

Date Sampled...: 02/02/10

Date Received...: 02/05/10

% Moisture.....: 18

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0039064						
Antimony	1.2	1.2	mg/kg	SW846 6010B	02/08-02/12/10	LVCEMLA8
		Dilution Factor: 1		MDL.....: 0.24		
Prep Batch #...: 0039073						
Silver	ND	1.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLA8
		Dilution Factor: 1		MDL.....: 0.29		
Arsenic	ND D	12.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLAU
		Dilution Factor: 10		MDL.....: 3.9		
Barium	45.0	6.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLAV
		Dilution Factor: 1		MDL.....: 0.30		
Beryllium	ND	0.61	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLAW
		Dilution Factor: 1		MDL.....: 0.21		
Boron	19.8 B,C,D	122	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLAX
		Dilution Factor: 10		MDL.....: 18.3		
Cadmium	0.50 B	0.61	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLA0
		Dilution Factor: 1		MDL.....: 0.061		
Cobalt	5.9 B	6.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLA1
		Dilution Factor: 1		MDL.....: 1.1		
Chromium	9.1	1.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLAF
		Dilution Factor: 1		MDL.....: 0.37		
Copper	8.8	3.0	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLA2
		Dilution Factor: 1		MDL.....: 0.89		
Lithium	4.9 B	6.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLA4
		Dilution Factor: 1		MDL.....: 0.80		
Manganese	213	1.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLA5
		Dilution Factor: 1		MDL.....: 0.19		
Nickel	9.7	4.9	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLA6
		Dilution Factor: 1		MDL.....: 0.27		

(Continued on next page)

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N35

TOTAL Metals

Lot-Sample #...: FOB050589-002

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION-	WORK
		LIMIT	UNITS		ANALYSIS DATE	ORDER #
Lead	3.9 B,D	12.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLA3
		Dilution Factor: 10		MDL.....: 2.1		
Selenium	4.3 B,D	18.3	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLA7
		Dilution Factor: 10		MDL.....: 3.5		
Tin	1.1 B	12.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLAC
		Dilution Factor: 1		MDL.....: 0.99		
Strontium	28.5	1.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLA9
		Dilution Factor: 1		MDL.....: 0.091		
Thallium	ND D	24.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLAA
		Dilution Factor: 10		MDL.....: 18.4		
Uranium	ND	60.9	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLAG
		Dilution Factor: 1		MDL.....: 6.4		
Vanadium	33.5	6.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLAD
		Dilution Factor: 1		MDL.....: 1.5		
Zinc	63.2	6.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEMLAE
		Dilution Factor: 1		MDL.....: 2.4		
Prep Batch #...: 0040503						
Mercury	ND	0.040	mg/kg	SW846 7471A	02/09-02/10/10	LVCEMLAJ
		Dilution Factor: 1		MDL.....: 0.0061		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N36

TOTAL Metals

Lot-Sample #...: FOB050589-003  
Date Sampled...: 02/02/10  
% Moisture.....: 22

Date Received...: 02/05/10

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0039064						
Antimony	0.99 B	1.3	mg/kg	SW846 6010B	02/08-02/12/10	LVCEN1A8
		Dilution Factor: 1		MDL.....: 0.26		
Prep Batch #...: 0039073						
Silver	ND	1.3	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1A8
		Dilution Factor: 1		MDL.....: 0.30		
Arsenic	2.5	1.3	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1AU
		Dilution Factor: 1		MDL.....: 0.40		
Barium	44.1	6.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1AV
		Dilution Factor: 1		MDL.....: 0.32		
Beryllium	ND	0.64	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1AW
		Dilution Factor: 1		MDL.....: 0.22		
Boron	16.9 C	12.8	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1AX
		Dilution Factor: 1		MDL.....: 1.9		
Cadmium	0.35 B	0.64	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1AO
		Dilution Factor: 1		MDL.....: 0.064		
Cobalt	4.6 B	6.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1AI
		Dilution Factor: 1		MDL.....: 1.2		
Chromium	8.2	1.3	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1AF
		Dilution Factor: 1		MDL.....: 0.39		
Copper	6.8	3.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1A2
		Dilution Factor: 1		MDL.....: 0.93		
Lithium	4.4 B	6.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1AA
		Dilution Factor: 1		MDL.....: 0.84		
Manganese	184	1.3	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1A5
		Dilution Factor: 1		MDL.....: 0.20		
Nickel	7.6	5.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1A6
		Dilution Factor: 1		MDL.....: 0.29		

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N36

TOTAL Metals

Lot-Sample #....: FOB050589-003

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Lead	2.1	1.3	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1A3
		Dilution Factor: 1		MDL.....: 0.22		
Selenium	ND	1.9	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1A7
		Dilution Factor: 1		MDL.....: 0.37		
Tin	ND	12.8	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1AC
		Dilution Factor: 1		MDL.....: 1.0		
Strontium	27.5	1.3	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1A9
		Dilution Factor: 1		MDL.....: 0.096		
Thallium	ND	2.6	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1AA
		Dilution Factor: 1		MDL.....: 1.9		
Uranium	8.9 B	63.8	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1AG
		Dilution Factor: 1		MDL.....: 6.7		
Vanadium	25.2	6.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1AD
		Dilution Factor: 1		MDL.....: 1.6		
Zinc	28.7	6.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEN1AE
		Dilution Factor: 1		MDL.....: 2.5		
Prep Batch #....: 0040503						
Mercury	0.013 B	0.042	mg/kg	SW846 7471A	02/09-02/10/10	LVCEN1AJ
		Dilution Factor: 1		MDL.....: 0.0064		

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N37

TOTAL Metals

Lot-Sample #...: F0B050589-004  
 Date Sampled...: 02/02/10  
 % Moisture.....: 7.0

Date Received...: 02/05/10

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	0039064					
Antimony	0.90 B	1.1	mg/kg	SW846 6010B	02/08-02/12/10	LVCEP1AH
		Dilution Factor: 1		MDL.....: 0.22		
Prep Batch #...	0039073					
Silver	ND	1.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1A8
		Dilution Factor: 1		MDL.....: 0.25		
Arsenic	ND D	10.8	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1AU
		Dilution Factor: 10		MDL.....: 3.4		
Barium	66.9	5.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1AV
		Dilution Factor: 1		MDL.....: 0.27		
Beryllium	0.26 B	0.54	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1AW
		Dilution Factor: 1		MDL.....: 0.18		
Boron	25.8 B, D C	108	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1AX
	<i>P.D.M.H. MGTW 6/28/2011</i>	Dilution Factor: 10		MDL.....: 16.1		
Cadmium	0.52 B	0.54	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1A0
		Dilution Factor: 1		MDL.....: 0.054		
Cobalt	8.6	5.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1A1
		Dilution Factor: 1		MDL.....: 1.0		
Chromium	9.5	1.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1AF
		Dilution Factor: 1		MDL.....: 0.33		
Copper	10.1	2.7	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1A2
		Dilution Factor: 1		MDL.....: 0.78		
Lithium	5.0 B	5.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1A4
		Dilution Factor: 1		MDL.....: 0.71		
Manganese	312	1.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1A5
		Dilution Factor: 1		MDL.....: 0.17		
Nickel	10.9	4.3	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1A6
		Dilution Factor: 1		MDL.....: 0.24		

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N37

TOTAL Metals

Lot-Sample #...: FOB050589-004

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION-	WORK
		LIMIT	UNITS		ANALYSIS DATE	ORDER #
Lead	4.1 B,D	10.8	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1A3
		Dilution Factor: 10		MDL.....: 1.8		
Selenium	3.5 B,D	16.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1A7
		Dilution Factor: 10		MDL.....: 3.1		
Tin	0.97 B	10.8	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1AC
		Dilution Factor: 1		MDL.....: 0.88		
Strontium	24.8	1.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1A9
		Dilution Factor: 1		MDL.....: 0.081		
Thallium	ND D	21.5	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1AA
		Dilution Factor: 10		MDL.....: 16.2		
Uranium	8.2 B	53.8	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1AG
		Dilution Factor: 1		MDL.....: 5.6		
Vanadium	43.0	5.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1AD
		Dilution Factor: 1		MDL.....: 1.4		
Zinc	42.5	5.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEP1AE
		Dilution Factor: 1		MDL.....: 2.1		
Prep Batch #...: 0040503						
Mercury	0.012 B	0.035	mg/kg	SW846 7471A	02/09-02/10/10	LVCEP1AJ
		Dilution Factor: 1		MDL.....: 0.0054		

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

D Result was obtained from the analysis of a dilution.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N38

TOTAL Metals

Lot-Sample #...: FOB050589-005  
Date Sampled...: 02/02/10  
% Moisture.....: 7.1

Date Received...: 02/05/10

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0039064						
Antimony	1.2	1.1	mg/kg	SW846 6010B	02/08-02/12/10	LVCEQ1AH
		Dilution Factor: 1		MDL.....: 0.22		
Prep Batch #...: 0039073						
Silver	ND	1.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1A8
		Dilution Factor: 1		MDL.....: 0.25		
Arsenic	ND D	10.8	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1AU
		Dilution Factor: 10		MDL.....: 3.4		
Barium	61.4	5.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1AV
		Dilution Factor: 1		MDL.....: 0.27		
Beryllium	0.24 B	0.54	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1AW
		Dilution Factor: 1		MDL.....: 0.18		
Boron	25.2 B, D, C <i>P.D. Min 1/27/11 6/28/2011</i>	108	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1AX
		Dilution Factor: 10		MDL.....: 16.1		
Cadmium	0.49 B	0.54	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1A0
		Dilution Factor: 1		MDL.....: 0.054		
Cobalt	7.9	5.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1A1
		Dilution Factor: 1		MDL.....: 1.0		
Chromium	9.7	1.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1AF
		Dilution Factor: 1		MDL.....: 0.33		
Copper	9.6	2.7	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1A2
		Dilution Factor: 1		MDL.....: 0.78		
Lithium	4.6 B	5.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1A4
		Dilution Factor: 1		MDL.....: 0.71		
Manganese	273	1.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1A5
		Dilution Factor: 1		MDL.....: 0.17		
Nickel	10.1	4.3	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1A6
		Dilution Factor: 1		MDL.....: 0.24		

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N38

TOTAL Metals

Lot-Sample #...: FOB050589-005

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Lead	3.8 B,D	10.8	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1A3
		Dilution Factor: 10		MDL.....: 1.9		
Selenium	ND D	16.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1A7
		Dilution Factor: 10		MDL.....: 3.1		
Tin	ND	10.8	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1AC
		Dilution Factor: 1		MDL.....: 0.88		
Strontium	22.6	1.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1A9
		Dilution Factor: 1		MDL.....: 0.081		
Thallium	ND D	21.5	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1AA
		Dilution Factor: 10		MDL.....: 16.2		
Uranium	8.9 B	53.8	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1AG
		Dilution Factor: 1		MDL.....: 5.6		
Vanadium	40.0	5.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1AD
		Dilution Factor: 1		MDL.....: 1.4		
Zinc	41.4	5.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEQ1AE
		Dilution Factor: 1		MDL.....: 2.1		
Prep Batch #...: 0040503						
Mercury	0.012 B	0.036	mg/kg	SW846 7471A	02/09-02/10/10	LVCEQ1AJ
		Dilution Factor: 1		MDL.....: 0.0054		

NOTE(S):

- Results and reporting limits have been adjusted for dry weight.
- D Result was obtained from the analysis of a dilution.
- B Estimated result. Result is less than RL.

## CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N39

## TOTAL Metals

Lot-Sample #...: FOB050589-006

Matrix.....: SOLID

Date Sampled...: 02/02/10

Date Received...: 02/05/10

% Moisture.....: 2.3

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
		LIMIT	UNITS				
Prep Batch #...: 0039064							
Antimony	1.1	1.0	mg/kg		SW846 6010B	02/08-02/12/10	LVCET1A8
		Dilution Factor: 1			MDL.....: 0.20		
Prep Batch #...: 0039073							
Silver	ND	1.0	mg/kg		SW846 6010B	02/08-02/11/10	LVCET1A8
		Dilution Factor: 1			MDL.....: 0.24		
Arsenic	ND D	10.2	mg/kg		SW846 6010B	02/08-02/11/10	LVCET1AU
		Dilution Factor: 10			MDL.....: 3.2		
Barium	59.8	5.1	mg/kg		SW846 6010B	02/08-02/11/10	LVCET1AV
		Dilution Factor: 1			MDL.....: 0.26		
Beryllium	0.20 B	0.51	mg/kg		SW846 6010B	02/08-02/11/10	LVCET1AW
		Dilution Factor: 1			MDL.....: 0.17		
Boron	21.0 B,C,D	102	mg/kg		SW846 6010B	02/08-02/11/10	LVCET1AX
		Dilution Factor: 10			MDL.....: 15.4		
Cadmium	0.49 B	0.51	mg/kg		SW846 6010B	02/08-02/11/10	LVCET1A0
		Dilution Factor: 1			MDL.....: 0.051		
Cobalt	6.8	5.1	mg/kg		SW846 6010B	02/08-02/11/10	LVCET1A1
		Dilution Factor: 1			MDL.....: 0.96		
Chromium	9.8	1.0	mg/kg		SW846 6010B	02/08-02/11/10	LVCET1AF
		Dilution Factor: 1			MDL.....: 0.31		
Copper	9.0	2.6	mg/kg		SW846 6010B	02/08-02/11/10	LVCET1A2
		Dilution Factor: 1			MDL.....: 0.74		
Lithium	ND D	51.2	mg/kg		SW846 6010B	02/08-02/11/10	LVCET1A4
		Dilution Factor: 10			MDL.....: 6.7		
Manganese	241	1.0	mg/kg		SW846 6010B	02/08-02/11/10	LVCET1A5
		Dilution Factor: 1			MDL.....: 0.16		
Nickel	9.2	4.1	mg/kg		SW846 6010B	02/08-02/11/10	LVCET1A6
		Dilution Factor: 1			MDL.....: 0.23		

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N39

TOTAL Metals

Lot-Sample #...: FOB050589-006

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION-	WORK
		LIMIT	UNITS		ANALYSIS DATE	ORDER #
Lead	3.6 B,D	10.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCET1A3
		Dilution Factor: 10		MDL.....: 1.8		
Selenium	ND D	15.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCET1A7
		Dilution Factor: 10		MDL.....: 3.0		
Tin	1.2 B	10.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCET1AC
		Dilution Factor: 1		MDL.....: 0.83		
Strontium	32.5 D	10.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCET1A9
		Dilution Factor: 10		MDL.....: 0.77		
Thallium	ND D	20.5	mg/kg	SW846 6010B	02/08-02/11/10	LVCET1AA
		Dilution Factor: 10		MDL.....: 15.5		
Uranium	7.0 B	51.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCET1AG
		Dilution Factor: 1		MDL.....: 5.4		
Vanadium	36.5	5.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCET1AD
		Dilution Factor: 1		MDL.....: 1.3		
Zinc	38.0	5.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCET1AE
		Dilution Factor: 1		MDL.....: 2.0		
Prep Batch #...: 0040503						
Mercury	0.0077 B	0.034	mg/kg	SW846 7471A	02/09-02/10/10	LVCET1AJ
		Dilution Factor: 1		MDL.....: 0.0051		

NOTE(S):

- Results and reporting limits have been adjusted for dry weight.
- D Result was obtained from the analysis of a dilution.
- B Estimated result. Result is less than RL.
- C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N40

TOTAL Metals

Lot-Sample #...: F0B050589-007  
Date Sampled...: 02/02/10  
% Moisture.....: 1.9

Date Received...: 02/05/10

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0039064						
Antimony	1.1	1.0	mg/kg	SW846 6010B	02/08-02/12/10	LVCEVIAH
		Dilution Factor: 1		MDL.....: 0.20		
Prep Batch #...: 0039073						
Silver	ND	1.0	mg/kg	SW846 6010B	02/08-02/11/10	LVCEVIA8
		Dilution Factor: 1		MDL.....: 0.24		
Arsenic	ND D	10.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEVIAU
		Dilution Factor: 10		MDL.....: 3.2		
Barium	49.0	5.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEVIAV
		Dilution Factor: 1		MDL.....: 0.25		
Beryllium	0.18 B	0.51	mg/kg	SW846 6010B	02/08-02/11/10	LVCEVIAW
		Dilution Factor: 1		MDL.....: 0.17		
Boron	16.5 B,C,D	102	mg/kg	SW846 6010B	02/08-02/11/10	LVCEVIA X
		Dilution Factor: 10		MDL.....: 15.3		
Cadmium	0.39 B	0.51	mg/kg	SW846 6010B	02/08-02/11/10	LVCEVIA0
		Dilution Factor: 1		MDL.....: 0.051		
Cobalt	5.2	5.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEVIA1
		Dilution Factor: 1		MDL.....: 0.96		
Chromium	9.2	1.0	mg/kg	SW846 6010B	02/08-02/11/10	LVCEVIA F
		Dilution Factor: 1		MDL.....: 0.31		
Copper	7.6	2.5	mg/kg	SW846 6010B	02/08-02/11/10	LVCEVIA2
		Dilution Factor: 1		MDL.....: 0.74		
Lithium	ND D	51.0	mg/kg	SW846 6010B	02/08-02/11/10	LVCEVIA4
		Dilution Factor: 10		MDL.....: 6.7		
Manganese	203	1.0	mg/kg	SW846 6010B	02/08-02/11/10	LVCEVIA5
		Dilution Factor: 1		MDL.....: 0.16		
Nickel	8.5	4.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEVIA6
		Dilution Factor: 1		MDL.....: 0.23		

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N40

TOTAL Metals

Lot-Sample #...: F0B050589-007

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION-	WORK
		LIMIT	UNITS		ANALYSIS DATE	ORDER #
Lead	1.9 B,D	10.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEV1A3
		Dilution Factor: 10		MDL.....: 1.8		
Selenium	ND D	15.3	mg/kg	SW846 6010B	02/08-02/11/10	LVCEV1A7
		Dilution Factor: 10		MDL.....: 2.9		
Tin	ND	10.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEV1AC
		Dilution Factor: 1		MDL.....: 0.83		
Strontium	35.2 D	10.2	mg/kg	SW846 6010B	02/08-02/11/10	LVCEV1A9
		Dilution Factor: 10		MDL.....: 0.76		
Thallium	ND D	20.4	mg/kg	SW846 6010B	02/08-02/11/10	LVCEV1AA
		Dilution Factor: 10		MDL.....: 15.4		
Uranium	ND	51.0	mg/kg	SW846 6010B	02/08-02/11/10	LVCEV1AG
		Dilution Factor: 1		MDL.....: 5.4		
Vanadium	28.0	5.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEV1AD
		Dilution Factor: 1		MDL.....: 1.3		
Zinc	30.2	5.1	mg/kg	SW846 6010B	02/08-02/11/10	LVCEV1AE
		Dilution Factor: 1		MDL.....: 2.0		
Prep Batch #...: 0040503						
Mercury	ND	0.034	mg/kg	SW846 7471A	02/09-02/10/10	LVCEV1AJ
		Dilution Factor: 1		MDL.....: 0.0051		

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

B Estimated result. Result is less than RL.

C Method blank contamination. The associated method blank contains the target analyte at a reportable level.

## METHOD BLANK REPORT

## TOTAL Metals

Client Lot #...: FOB050589

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: FOB080000-064 Prep Batch #...: 0039064						
Antimony	ND	1.0	mg/kg	SW846 6010B	02/08-02/12/10	LVDVH1AA
		Dilution Factor: 1				
MB Lot-Sample #: FOB080000-073 Prep Batch #...: 0039073						
Arsenic	ND	1.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AA
		Dilution Factor: 1				
Barium	ND	5.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AC
		Dilution Factor: 1				
Beryllium	ND	0.50	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AD
		Dilution Factor: 1				
Boron	2.2 B	10.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AE
		Dilution Factor: 1				
Cadmium	ND	0.50	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AF
		Dilution Factor: 1				
Chromium	ND	1.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AW
		Dilution Factor: 1				
Cobalt	ND	5.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AG
		Dilution Factor: 1				
Copper	ND	2.5	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AH
		Dilution Factor: 1				
Lead	ND	1.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AJ
		Dilution Factor: 1				
Lithium	ND	5.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AK
		Dilution Factor: 1				
Manganese	ND	1.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AL
		Dilution Factor: 1				
Nickel	ND	4.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AM
		Dilution Factor: 1				
Selenium	ND	1.5	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AN
		Dilution Factor: 1				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: FOB050589

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION-	WORK
		LIMIT	UNITS		ANALYSIS DATE	ORDER #
Silver	ND	1.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AP
		Dilution Factor: 1				
Strontium	ND	1.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AQ
		Dilution Factor: 1				
Thallium	ND	2.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AR
		Dilution Factor: 1				
Tin	ND	10.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AT
		Dilution Factor: 1				
Uranium	ND	50.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AX
		Dilution Factor: 1				
Vanadium	ND	5.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AU
		Dilution Factor: 1				
Zinc	ND	5.0	mg/kg	SW846 6010B	02/08-02/11/10	LVDV71AV
		Dilution Factor: 1				

MB Lot-Sample #: FOB090000-503 Prep Batch #...: 0040503

Mercury	ND	0.033	mg/kg	SW846 7471A	02/09-02/10/10	LVGQ11AA
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

## LABORATORY CONTROL SAMPLE DATA REPORT

## TOTAL Metals

Client Lot #...: F0B050589

Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F0B080000-064 Prep Batch #...: 0039064							
Antimony	100	87.7	mg/kg	88	SW846 6010B	02/08-02/12/10	LVDVH1AC
					Dilution Factor: 1		
LCS Lot-Sample#: F0B080000-073 Prep Batch #...: 0039073							
Arsenic	158	152	mg/kg	96	SW846 6010B	02/08-02/11/10	LVDV71A0
					Dilution Factor: 1		
Barium	348	333	mg/kg	96	SW846 6010B	02/08-02/11/10	LVDV71A1
					Dilution Factor: 1		
Beryllium	106	106	mg/kg	100	SW846 6010B	02/08-02/11/10	LVDV71A2
					Dilution Factor: 1		
Boron	136	149	mg/kg	110	SW846 6010B	02/08-02/11/10	LVDV71A3
					Dilution Factor: 1		
Cadmium	187	176	mg/kg	94	SW846 6010B	02/08-02/11/10	LVDV71A4
					Dilution Factor: 1		
Cobalt	277	252	mg/kg	91	SW846 6010B	02/08-02/11/10	LVDV71A5
					Dilution Factor: 1		
Copper	129	121	mg/kg	94	SW846 6010B	02/08-02/11/10	LVDV71A6
					Dilution Factor: 1		
Lead	172	161	mg/kg	94	SW846 6010B	02/08-02/11/10	LVDV71A7
					Dilution Factor: 1		
Lithium	100	95.6	mg/kg	96	SW846 6010B	02/08-02/12/10	LVDV71A8
					Dilution Factor: 1		
Manganese	633	596	mg/kg	94	SW846 6010B	02/08-02/11/10	LVDV71A9
					Dilution Factor: 1		
Nickel	99.0	90.1	mg/kg	91	SW846 6010B	02/08-02/11/10	LVDV71CA
					Dilution Factor: 1		
Selenium	148	144	mg/kg	97	SW846 6010B	02/08-02/11/10	LVDV71CC
					Dilution Factor: 1		

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## LABORATORY CONTROL SAMPLE DATA REPORT

## TOTAL Metals

Client Lot #...: F0B050589

Matrix.....: SOLID

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCNT RECVRY</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Silver	66.0	64.7	mg/kg	98	SW846 6010B	02/08-02/11/10	LVDV71CD
			Dilution Factor: 1				
Strontium	176	166	mg/kg	94	SW846 6010B	02/08-02/11/10	LVDV71CE
			Dilution Factor: 1				
Thallium	268	250	mg/kg	93	SW846 6010B	02/08-02/11/10	LVDV71CF
			Dilution Factor: 1				
Tin	123	115	mg/kg	93	SW846 6010B	02/08-02/11/10	LVDV71CG
			Dilution Factor: 1				
Vanadium	194	184	mg/kg	95	SW846 6010B	02/08-02/11/10	LVDV71CH
			Dilution Factor: 1				
Zinc	394	404	mg/kg	103	SW846 6010B	02/08-02/11/10	LVDV71CJ
			Dilution Factor: 1				
Chromium	89.5	81.3	mg/kg	91	SW846 6010B	02/08-02/11/10	LVDV71CK
			Dilution Factor: 1				
Uranium	100	97.2	mg/kg	97	SW846 6010B	02/08-02/12/10	LVDV71CL
			Dilution Factor: 1				
<b>LCS Lot-Sample#:</b> F0B090000-503 <b>Prep Batch #...</b> : 0040503							
Mercury	7.34	6.28	mg/kg	86	SW846 7471A	02/09-02/10/10	LVGQ11AC
			Dilution Factor: 10				

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: FOB050589  
Date Sampled...: 02/02/10

Date Received...: 02/05/10

Matrix.....: SOLID

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
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MS Lot-Sample #: FOB050589-001 Prep Batch #....: 0039064

% Moisture.....: 4.6

Antimony

1.1	105	84.2	mg/kg	79			SW846 6010B	02/08-02/12/10	LVCEH1CX
1.1	105	94.5	mg/kg	89	12		SW846 6010B	02/08-02/12/10	LVCEH1C0

Dilution Factor: 1

MS Lot-Sample #: FOB050589-001 Prep Batch #....: 0039073

% Moisture.....: 4.6

Arsenic

ND	105	101 D	mg/kg	96			SW846 6010B	02/08-02/11/10	LVCEH1C5
ND	105	104 D	mg/kg	98	2.9		SW846 6010B	02/08-02/11/10	LVCEH1C6

Dilution Factor: 10

Barium

53.9	105	160	mg/kg	101			SW846 6010B	02/08-02/11/10	LVCEH1C7
53.9	105	160	mg/kg	102	0.41		SW846 6010B	02/08-02/11/10	LVCEH1C8

Dilution Factor: 1

Beryllium

0.22	105	107	mg/kg	102			SW846 6010B	02/08-02/11/10	LVCEH1C9
0.22	105	107	mg/kg	102	0.29		SW846 6010B	02/08-02/11/10	LVCEH1DA

Dilution Factor: 1

Boron

23.6	105	122 D	mg/kg	94			SW846 6010B	02/08-02/11/10	LVCEH1DC
23.6	105	125 D	mg/kg	97	2.8		SW846 6010B	02/08-02/11/10	LVCEH1DD

Dilution Factor: 10

Cadmium

0.77	105	99.7	mg/kg	94			SW846 6010B	02/08-02/11/10	LVCEH1DE
0.77	105	100	mg/kg	95	0.42		SW846 6010B	02/08-02/11/10	LVCEH1DF

Dilution Factor: 1

Chromium

11.5	105	110	mg/kg	94			SW846 6010B	02/08-02/11/10	LVCEH1CT
11.5	105	109	mg/kg	93	0.81		SW846 6010B	02/08-02/11/10	LVCEH1CU

Dilution Factor: 1

Cobalt

7.1	105	103	mg/kg	91			SW846 6010B	02/08-02/11/10	LVCEH1DG
7.1	105	103	mg/kg	92	0.42		SW846 6010B	02/08-02/11/10	LVCEH1DH

Dilution Factor: 1

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: F0B050589  
Date Sampled...: 02/02/10

Date Received...: 02/05/10

Matrix.....: SOLID

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Copper									
	16.2	105	116	mg/kg	95		SW846 6010B	02/08-02/11/10	LVCEH1DJ
	16.2	105	115	mg/kg	95	0.45	SW846 6010B	02/08-02/11/10	LVCEH1DK
Dilution Factor: 1									
Lead									
	15.1	105	116 D	mg/kg	96		SW846 6010B	02/08-02/11/10	LVCEH1DL
	15.1	105	113 D	mg/kg	94	1.8	SW846 6010B	02/08-02/11/10	LVCEH1DM
Dilution Factor: 10									
Lithium									
	ND	105	110 D	mg/kg	100		SW846 6010B	02/08-02/11/10	LVCEH1DN
	ND	105	110 D	mg/kg	100	0.24	SW846 6010B	02/08-02/11/10	LVCEH1DP
Dilution Factor: 10									
Manganese									
	244	105	360	mg/kg	111		SW846 6010B	02/08-02/11/10	LVCEH1DQ
	244	105	365	mg/kg	115	1.3	SW846 6010B	02/08-02/11/10	LVCEH1DR
Dilution Factor: 1									
Nickel									
	12.3	105	108	mg/kg	91		SW846 6010B	02/08-02/11/10	LVCEH1DT
	12.3	105	108	mg/kg	91	0.14	SW846 6010B	02/08-02/11/10	LVCEH1DU
Dilution Factor: 1									
Selenium									
	ND	105	105 D	mg/kg	100		SW846 6010B	02/08-02/11/10	LVCEH1DV
	ND	105	102 D	mg/kg	97	3.3	SW846 6010B	02/08-02/11/10	LVCEH1DW
Dilution Factor: 10									
Silver									
	ND	10.5	9.49	mg/kg	91		SW846 6010B	02/08-02/11/10	LVCEH1DX
	ND	10.5	9.38	mg/kg	90	1.2	SW846 6010B	02/08-02/11/10	LVCEH1DO
Dilution Factor: 1									
Strontium									
	22.1	105	124 D	mg/kg	97		SW846 6010B	02/08-02/11/10	LVCEH1D1
	22.1	105	127 D	mg/kg	100	2.3	SW846 6010B	02/08-02/11/10	LVCEH1D2
Dilution Factor: 10									
Thallium									
	ND	105	98.7 D	mg/kg	94		SW846 6010B	02/08-02/11/10	LVCEH1CJ
	ND	105	97.3 D	mg/kg	93	1.4	SW846 6010B	02/08-02/11/10	LVCEH1CK
Dilution Factor: 10									

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: F0B050589  
Date Sampled...: 02/02/10

Date Received...: 02/05/10

Matrix.....: SOLID

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
<b>Tin</b>									
	3.8	105	99.2	mg/kg	91		SW846 6010B	02/08-02/11/10	LVCEH1CL
	3.8	105	107	mg/kg	99	7.9	SW846 6010B	02/08-02/11/10	LVCEH1CM
Dilution Factor: 1									
<b>Uranium</b>									
	8.5	105	110	mg/kg	97		SW846 6010B	02/08-02/11/10	LVCEH1CV
	8.5	105	111	mg/kg	98	0.89	SW846 6010B	02/08-02/11/10	LVCEH1CW
Dilution Factor: 1									
<b>Vanadium</b>									
	34.3	105	139	mg/kg	100		SW846 6010B	02/08-02/11/10	LVCEH1CN
	34.3	105	140	mg/kg	101	0.63	SW846 6010B	02/08-02/11/10	LVCEH1CP
Dilution Factor: 1									
<b>Zinc</b>									
	251	105	345	mg/kg	90		SW846 6010B	02/08-02/11/10	LVCEH1CQ
	251	105	346	mg/kg	91	0.34	SW846 6010B	02/08-02/11/10	LVCEH1CR
Dilution Factor: 1									

MS Lot-Sample #: F0B050589-001 Prep Batch #...: 0040503

% Moisture.....: 4.6

<b>Mercury</b>									
	0.012	0.175	0.173	mg/kg	92		SW846 7471A	02/09-02/10/10	LVCEH1C1
	0.012	0.175	0.172	mg/kg	91	1.1	SW846 7471A	02/09-02/10/10	LVCEH1C2
Dilution Factor: 1									

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

D Result was obtained from the analysis of a dilution.

# WET CHEMISTRY

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N34

General Chemistry

Lot-Sample #...: F0B050589-001    Work Order #...: LVCEH    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 % Moisture.....: 4.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Phosphate as P, Ortho	5.9	5.0	mg/kg	MCAWW 300.0A	02/06/10	0037050
				Dilution Factor: 1    MDL.....: 0.50		
pH (solid)	8.7	0.10	No Units	SW846 9045C	02/10/10	0040371
				Dilution Factor: 1    MDL.....:		
Bromide	ND	2.5	mg/kg	MCAWW 300.0A	02/06/10	0037045
				Dilution Factor: 1    MDL.....: 0.26		
Chloride	0.45 B	2.0	mg/kg	MCAWW 300.0A	02/06/10	0037046
				Dilution Factor: 1    MDL.....: 0.20		
Fluoride	1.1	1.0	mg/kg	MCAWW 300.0A	02/06/10	0037047
				Dilution Factor: 1    MDL.....: 0.10		
Nitrate	1.1	0.20	mg/kg	MCAWW 300.0A	02/06/10	0037048
				Dilution Factor: 1    MDL.....: 0.050		
Nitrite	ND	0.20	mg/kg	MCAWW 300.0A	02/06/10	0037049
				Dilution Factor: 1    MDL.....: 0.033		
Percent Moisture	4.6	0.10	%	MCAWW 160.3 MOD	02/12/10	0043076
				Dilution Factor: 1    MDL.....:		
Sulfate	16.8	5.0	mg/kg	MCAWW 300.0A	02/06/10	0037051
				Dilution Factor: 1    MDL.....: 0.50		

NOTE(S) :

- RL Reporting Limit
- B Estimated result. Result is less than RL.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N35

General Chemistry

Lot-Sample #...: F0B050589-002    Work Order #...: LVCEM    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 % Moisture.....: 18

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Phosphate as P, Ortho	2.5 B	5.0	mg/kg	MCAWW 300.0A	02/06/10	0037050
				Dilution Factor: 1	MDL.....: 0.50	
pH (solid)	9.1	0.10	No Units	SW846 9045C	02/10/10	0040371
				Dilution Factor: 1	MDL.....:	
Bromide	ND	2.5	mg/kg	MCAWW 300.0A	02/06/10	0037045
				Dilution Factor: 1	MDL.....: 0.26	
Chloride	1.0 B	2.0	mg/kg	MCAWW 300.0A	02/06/10	0037046
				Dilution Factor: 1	MDL.....: 0.20	
Fluoride	1.1	1.0	mg/kg	MCAWW 300.0A	02/06/10	0037047
				Dilution Factor: 1	MDL.....: 0.10	
Nitrate	0.26	0.20	mg/kg	MCAWW 300.0A	02/06/10	0037048
				Dilution Factor: 1	MDL.....: 0.050	
Nitrite	ND	0.20	mg/kg	MCAWW 300.0A	02/06/10	0037049
				Dilution Factor: 1	MDL.....: 0.033	
Percent Moisture	17.9	0.10	%	MCAWW 160.3 MOD	02/12/10	0043076
				Dilution Factor: 1	MDL.....:	
Sulfate	3.3 B	5.0	mg/kg	MCAWW 300.0A	02/06/10	0037051
				Dilution Factor: 1	MDL.....: 0.50	

NOTE(S):

- RL Reporting Limit
- B Estimated result. Result is less than RL.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N36

General Chemistry

Lot-Sample #...: FOB050589-003    Work Order #...: LVCEN    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 % Moisture.....: 22

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Phosphate as P, Ortho	ND	5.0	mg/kg	MCAWW 300.0A	02/06/10	0037050
				Dilution Factor: 1    MDL.....: 0.50		
pH (solid)	9.3	0.10	No Units	SW846 9045C	02/10/10	0040371
				Dilution Factor: 1    MDL.....:		
Bromide	ND	2.5	mg/kg	MCAWW 300.0A	02/06/10	0037045
				Dilution Factor: 1    MDL.....: 0.26		
Chloride	0.65 B	2.0	mg/kg	MCAWW 300.0A	02/06/10	0037046
				Dilution Factor: 1    MDL.....: 0.20		
Fluoride	0.85 B	1.0	mg/kg	MCAWW 300.0A	02/06/10	0037047
				Dilution Factor: 1    MDL.....: 0.10		
Nitrate	0.17 B	0.20	mg/kg	MCAWW 300.0A	02/06/10	0037048
				Dilution Factor: 1    MDL.....: 0.050		
Nitrite	ND	0.20	mg/kg	MCAWW 300.0A	02/06/10	0037049
				Dilution Factor: 1    MDL.....: 0.033		
Percent Moisture	21.6	0.10	%	MCAWW 160.3 MOD	02/12/10	0043076
				Dilution Factor: 1    MDL.....:		
Sulfate	2.2 B	5.0	mg/kg	MCAWW 300.0A	02/06/10	0037051
				Dilution Factor: 1    MDL.....: 0.50		

NOTE(S) :

- RL Reporting Limit
- B Estimated result. Result is less than RL.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N37

General Chemistry

Lot-Sample #....: F0B050589-004    Work Order #....: LVCEP    Matrix.....: SOLID  
 Date Sampled....: 02/02/10    Date Received...: 02/05/10  
 % Moisture.....: 7.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Phosphate as P, Ortho	ND	5.0	mg/kg	MCAWW 300.0A	02/06/10	0037050
				Dilution Factor: 1    MDL.....: 0.50		
pH (solid)	8.9	0.10	No Units	SW846 9045C	02/10/10	0040371
				Dilution Factor: 1    MDL.....:		
Bromide	ND	2.5	mg/kg	MCAWW 300.0A	02/06/10	0037045
				Dilution Factor: 1    MDL.....: 0.26		
Chloride	0.84 B	2.0	mg/kg	MCAWW 300.0A	02/06/10	0037046
				Dilution Factor: 1    MDL.....: 0.20		
Fluoride	0.44 B	1.0	mg/kg	MCAWW 300.0A	02/06/10	0037047
				Dilution Factor: 1    MDL.....: 0.10		
Nitrate	0.34	0.20	mg/kg	MCAWW 300.0A	02/06/10	0037048
				Dilution Factor: 1    MDL.....: 0.050		
Nitrite	ND	0.20	mg/kg	MCAWW 300.0A	02/06/10	0037049
				Dilution Factor: 1    MDL.....: 0.033		
Percent Moisture	7.0	0.10	%	MCAWW 160.3 MOD	02/12/10	0043076
				Dilution Factor: 1    MDL.....:		
Sulfate	1.4 B	5.0	mg/kg	MCAWW 300.0A	02/06/10	0037051
				Dilution Factor: 1    MDL.....: 0.50		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N38

General Chemistry

Lot-Sample #...: FOB050589-005    Work Order #...: LVCEQ    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 % Moisture.....: 7.1

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Phosphate as P, Ortho	ND	5.0	mg/kg	MCAWW 300.0A	02/06/10	0037050
				Dilution Factor: 1    MDL.....: 0.50		
pH (solid)	8.9	0.10	No Units	SW846 9045C	02/10/10	0040371
				Dilution Factor: 1    MDL.....:		
Bromide	ND	2.5	mg/kg	MCAWW 300.0A	02/06/10	0037045
				Dilution Factor: 1    MDL.....: 0.26		
Chloride	0.34 B	2.0	mg/kg	MCAWW 300.0A	02/06/10	0037046
				Dilution Factor: 1    MDL.....: 0.20		
Fluoride	0.49 B	1.0	mg/kg	MCAWW 300.0A	02/06/10	0037047
				Dilution Factor: 1    MDL.....: 0.10		
Nitrate	0.49	0.20	mg/kg	MCAWW 300.0A	02/06/10	0037048
				Dilution Factor: 1    MDL.....: 0.050		
Nitrite	ND	0.20	mg/kg	MCAWW 300.0A	02/06/10	0037049
				Dilution Factor: 1    MDL.....: 0.033		
Percent Moisture	7.1	0.10	%	MCAWW 160.3 MOD	02/12/10	0043076
				Dilution Factor: 1    MDL.....:		
Sulfate	1.8 B	5.0	mg/kg	MCAWW 300.0A	02/06/10	0037051
				Dilution Factor: 1    MDL.....: 0.50		

**NOTE(S) :**

RL Reporting Limit  
 B Estimated result. Result is less than RL.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N39

General Chemistry

Lot-Sample #...: F0B050589-006    Work Order #...: LVCET    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 % Moisture.....: 2.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Phosphate as P, Ortho	ND	5.0	mg/kg	MCAWW 300.0A	02/06/10	0037050
				Dilution Factor: 1    MDL.....: 0.50		
pH (solid)	9.5	0.10	No Units	SW846 9045C	02/10/10	0040371
				Dilution Factor: 1    MDL.....:		
Bromide	ND	2.5	mg/kg	MCAWW 300.0A	02/06/10	0037045
				Dilution Factor: 1    MDL.....: 0.26		
Chloride	2.1	2.0	mg/kg	MCAWW 300.0A	02/06/10	0037046
				Dilution Factor: 1    MDL.....: 0.20		
Fluoride	1.4	1.0	mg/kg	MCAWW 300.0A	02/06/10	0037047
				Dilution Factor: 1    MDL.....: 0.10		
Nitrate	0.14 B	0.20	mg/kg	MCAWW 300.0A	02/06/10	0037048
				Dilution Factor: 1    MDL.....: 0.050		
Nitrite	ND	0.20	mg/kg	MCAWW 300.0A	02/06/10	0037049
				Dilution Factor: 1    MDL.....: 0.033		
Percent Moisture	2.3	0.10	%	MCAWW 160.3 MOD	02/12/10	0043076
				Dilution Factor: 1    MDL.....:		
Sulfate	5.7	5.0	mg/kg	MCAWW 300.0A	02/06/10	0037051
				Dilution Factor: 1    MDL.....: 0.50		

NOTE(S):

- RL Reporting Limit
- B Estimated result. Result is less than RL.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B23N40

General Chemistry

Lot-Sample #...: F0B050589-007    Work Order #...: LVCEV    Matrix.....: SOLID  
 Date Sampled...: 02/02/10    Date Received...: 02/05/10  
 % Moisture.....: 1.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Phosphate as P, Ortho	ND	5.0	mg/kg	MCAWW 300.0A	02/06/10	0037050
				Dilution Factor: 1	MDL.....: 0.50	
Bromide	ND	2.5	mg/kg	MCAWW 300.0A	02/06/10	0037045
				Dilution Factor: 1	MDL.....: 0.26	
Chloride	4.2	2.0	mg/kg	MCAWW 300.0A	02/06/10	0037046
				Dilution Factor: 1	MDL.....: 0.20	
Fluoride	0.92 B	1.0	mg/kg	MCAWW 300.0A	02/06/10	0037047
				Dilution Factor: 1	MDL.....: 0.10	
Nitrate	0.092 B	0.20	mg/kg	MCAWW 300.0A	02/06/10	0037048
				Dilution Factor: 1	MDL.....: 0.050	
Nitrite	ND	0.20	mg/kg	MCAWW 300.0A	02/06/10	0037049
				Dilution Factor: 1	MDL.....: 0.033	
Percent Moisture	1.9	0.10	%	MCAWW 160.3 MOD	02/12/10	0043076
				Dilution Factor: 1	MDL.....:	
Sulfate	17.8	5.0	mg/kg	MCAWW 300.0A	02/06/10	0037051
				Dilution Factor: 1	MDL.....: 0.50	

**NOTE(S) :**

RL Reporting Limit

B Estimated result. Result is less than RL.

## METHOD BLANK REPORT

## General Chemistry

Client Lot #...: FOB050589

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bromide	ND	Work Order #: LVD541AA 2.5	mg/kg	MB Lot-Sample #: FOB060000-045 MCAWW 300.0A	02/06/10	0037045
		Dilution Factor: 1				
Chloride	ND	Work Order #: LVD571AA 2.0	mg/kg	MB Lot-Sample #: FOB060000-046 MCAWW 300.0A	02/06/10	0037046
		Dilution Factor: 1				
Fluoride	ND	Work Order #: LVD6C1AA 1.0	mg/kg	MB Lot-Sample #: FOB060000-047 MCAWW 300.0A	02/06/10	0037047
		Dilution Factor: 1				
Nitrate	ND	Work Order #: LVD6H1AA 0.20	mg/kg	MB Lot-Sample #: FOB060000-048 MCAWW 300.0A	02/06/10	0037048
		Dilution Factor: 1				
Nitrite	ND	Work Order #: LVD6N1AA 0.20	mg/kg	MB Lot-Sample #: FOB060000-049 MCAWW 300.0A	02/06/10	0037049
		Dilution Factor: 1				
Phosphate as P, Ortho	ND	Work Order #: LVD6Q1AA 5.0	mg/kg	MB Lot-Sample #: FOB060000-050 MCAWW 300.0A	02/06/10	0037050
		Dilution Factor: 1				
Sulfate	ND	Work Order #: LVD6R1AA 5.0	mg/kg	MB Lot-Sample #: FOB060000-051 MCAWW 300.0A	02/06/10	0037051
		Dilution Factor: 1				

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

## LABORATORY CONTROL SAMPLE DATA REPORT

## General Chemistry

Client Lot #...: F0B050589

Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH (solid)	7.00	7.00	No Units	100	SW846 9045C	02/10/10	0040371
Work Order #: LVHEW1AA LCS Lot-Sample#: F0B090000-371 Dilution Factor: 1							
Bromide	20.0	20.1	mg/kg	100	MCAWW 300.0A	02/06/10	0037045
Work Order #: LVD541AC LCS Lot-Sample#: F0B060000-045 Dilution Factor: 1							
Chloride	20.0	19.2	mg/kg	96	MCAWW 300.0A	02/06/10	0037046
Work Order #: LVD571AC LCS Lot-Sample#: F0B060000-046 Dilution Factor: 1							
Fluoride	10.0	9.79	mg/kg	98	MCAWW 300.0A	02/06/10	0037047
Work Order #: LVD6C1AC LCS Lot-Sample#: F0B060000-047 Dilution Factor: 1							
Nitrate	4.00	4.00	mg/kg	100	MCAWW 300.0A	02/06/10	0037048
Work Order #: LVD6H1AC LCS Lot-Sample#: F0B060000-048 Dilution Factor: 1							
Nitrite	1.60	1.58	mg/kg	99	MCAWW 300.0A	02/06/10	0037049
Work Order #: LVD6N1AC LCS Lot-Sample#: F0B060000-049 Dilution Factor: 1							
Phosphate as P, Ortho	80.0	79.2	mg/kg	99	MCAWW 300.0A	02/06/10	0037050
Work Order #: LVD6Q1AC LCS Lot-Sample#: F0B060000-050 Dilution Factor: 1							
Sulfate	80.0	77.2	mg/kg	97	MCAWW 300.0A	02/06/10	0037051
Work Order #: LVD6R1AC LCS Lot-Sample#: F0B060000-051 Dilution Factor: 1							

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: F0B050589  
Date Sampled...: 02/02/10

Date Received...: 02/05/10

Matrix.....: SOLID

Percent Moisture: 7.1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bromide	ND	20.0	20.6	mg/kg	103	MCAWW 300.0A	02/06/10	0037045
			Work Order #...: LVCEH1C3		MS Lot-Sample #: F0B050589-001			
			Dilution Factor: 1					
Chloride	0.45	20.0	20.4	mg/kg	100	MCAWW 300.0A	02/06/10	0037046
			Work Order #...: LVCEH1C4		MS Lot-Sample #: F0B050589-001			
			Dilution Factor: 1					
Fluoride	1.1	20.0	21.8	mg/kg	104	MCAWW 300.0A	02/06/10	0037047
			Work Order #...: LVCEH1D3		MS Lot-Sample #: F0B050589-001			
			Dilution Factor: 1					
Nitrate	1.1	4.00	5.21	mg/kg	102	MCAWW 300.0A	02/06/10	0037048
			Work Order #...: LVCEH1D4		MS Lot-Sample #: F0B050589-001			
			Dilution Factor: 1					
Nitrite	ND	1.00	1.01	mg/kg	101	MCAWW 300.0A	02/06/10	0037049
			Work Order #...: LVCEH1D5		MS Lot-Sample #: F0B050589-001			
			Dilution Factor: 1					
Phosphate as P, Ortho	5.9	40.0	46.5	mg/kg	101	MCAWW 300.0A	02/06/10	0037050
			Work Order #...: LVCEH1D6		MS Lot-Sample #: F0B050589-001			
			Dilution Factor: 1					
Sulfate	16.8	40.0	55.0	mg/kg	96	MCAWW 300.0A	02/06/10	0037051
			Work Order #...: LVCEH1D7		MS Lot-Sample #: F0B050589-001			
			Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.



SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: FOB050589

Work Order #....: LVCHR-SMP  
LVCHR-DUP

Matrix.....: SOLID

Date Sampled....: 02/04/10

Date Received...: 02/05/10

% Moisture.....: 0.0

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE</u>	<u>UNITS</u>	<u>RPD</u>	<u>RPD</u>	<u>METHOD</u>	<u>PREPARATION-</u>	<u>PREP</u>
		<u>RESULT</u>		<u>RPD</u>	<u>LIMIT</u>		<u>ANALYSIS DATE</u>	<u>BATCH #</u>
pH (solid)						SD Lot-Sample #: FOB060420-001		
8.5		8.5	No Units	0.12	(0-1.0)	SW846 9045C	02/10/10	0040371
			Dilution Factor: 1					

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F0B050589

Work Order #...: LVCEV-SMP  
LVCEV-DUP

Matrix.....: SOLID

Date Sampled...: 02/02/10

Date Received...: 02/05/10

% Moisture.....: 1.9

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE</u>	<u>UNITS</u>	<u>RPD</u>	<u>RPD</u>	<u>METHOD</u>	<u>PREPARATION-</u>	<u>PREP</u>
		<u>RESULT</u>		<u>RPD</u>	<u>LIMIT</u>		<u>ANALYSIS DATE</u>	<u>BATCH #</u>
Percent Moisture	1.9	1.9	%	0.54	(0-30)	SD Lot-Sample #: F0B050589-007		
						MCAWW 160.3 MOD	02/12/10	0043076

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F0B050589

Work Order #...: LVCGL-SMP  
LVCGL-DUP

Matrix.....: SOLID

Date Sampled...: 01/29/10

Date Received...: 02/05/10

% Moisture.....: 12

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Percent Moisture	11.8	10.8	%	9.0	(0-30)	SD Lot-Sample #: F0B060414-001 MCAWW 160.3 MOD	02/12/10	0043076
			Dilution Factor: 1					